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THE *AMERICAN JOURNAL* OF
**CLINICAL
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"Trifles Make Perfection;
and Perfection is no Trifle."

I HAVE you ever stopped to think, Doctor, that what counts most to you is not great learning or unusual talent, but just the ability, and the determination, to do all the little things well.

If you can see a little more under the microscope than someone else, and know what you see, you are going to diagnose your cases more accurately than they. If you learn to place your stitches more carefully, or administer your remedies with nicer discrimination, you are going to cure cases that other men lose. The mastery of every little detail, no matter how inconsequential, is preparing you for the mastery of larger problems.

It is from these "tremendous trifles" that great successes are built. They are the stepping stones to success. Don't pass them by. Don't let other men see later what you should have seen first; do later what you should have done at the beginning; get later the prizes that might have been yours.

Clinical Medicine finds its greatest opportunity and its finest mission in helping its readers with these "little" things. Its problems are your problems; and it asks your help in their solution. Tell us, briefly, of the therapeutic details that have contributed most to your success. Do this, not next month—"Do it now."

THE CLINIC PUBLISHING CO.
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FEBRUARY 1911

The American J

f Clinical Medicine

DEVOTED TO ACCURACY, DEPENDABILITY
AND TO THE

RNAI

ITY IN EVERY DEPARTMENT OF MEDICINE
OF THE DOCTOR

W. C. ABBOTT

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L STAFF:

A. S. BURDICK

E. M. .

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Vol. 18

JANUARY, 1911

No. 1

A SONG OF THE NEW YEAR

By GEORGE F. BUTLER, M. D.

I.

WE should not mourn. God lays on every breast
Some burden to be borne through earthly years.
Each deemeth his own heart the sorest pressed,
And none of all as bitter as his tears.
We should not let our sorrows and lone fears
Veil from our eyes the beautiful on earth;
For Truth and Virtue reign, and Love oft cheers,
While hopeful trust and a clear spirit worth
Glow with the fires of Love and Pity's gentle birth.

II.

To lift the beggar's burden from his heart
And wake to life and joy his slumbering soul;
The fetters of the poor drug slave to part
Till from his sorrow-stricken days shall roll
The shadow of temptation; to control
The passion-fires within us, and renew
Life's pristine purity—the snow-white soul
That clothes the immortal spirit whence it grew—
These still shall make our journey beautiful and true

III.

What are our tears if through our pains we rise
To learn when sorrow is a diadem,
And that earth's poverty and cares and sighs
We may relieve; whom bigots may condemn,
And deem it sin to touch their garments' hem—
To save these from their patient suffering,
Or if we help a single soul to stem
The tide of woe that want and penury bring—
What joy to heal the wounds left by oppression's sting!

IV.

'Tis joy to feed the hungry; to restore
To warmth and gladness whom the chilling breath
Of winter tortures; to relieve the poor,
And drive from wasted homes the spectre Death:
To deem no act, however low, beneath
Our happier lot, but lift in tears of joy
The meanest earth-mate—these shall be a wreath
Of love and beauty time can ne'er destroy,
And render pure and sweet life's eloquent employ.

V.

Let not religion's dogmas stay our leet
From Truth's clear pathway, nor the heart's behests—
That finite lead to what is infinite—
By the world's cant be stifled in our breasts,
Whate'er our lives with truth and love invests,
This fear not to pursue, though it shall be
To jeopardize our deepest interests;
To sever the sweet hopes of Friendship's tie,
Or bring our earthly state from wealth to beggary.

VI.

Seek virtue in pure deeds and charities
That claim the reverence of all mankind;
Let no base fear of men e'er close thine eyes
To Truth's sublimity, or Hatred bind
Thy tameless spirit, that with chains confined
Sickens and dies of grief—pure, bright and free
The law of beauty in thy heart enshrined,
Which shall with sweetest virtues compass thee,
Revealing to thine eyes thy soul's divinity.

VII.

Thus do we rise to purer realms of thought,
To clearer visions of a love-to-be,
When to earth's grief a braver trust hath brought
Release from bigot creeds and slavery
To shameless Law beneath whose mask doth lie
The curse of Capital—whose iron hand
Releases not, when crushed Humanity
Bathes with most bitter tears, that sways the land
With brutish power, though heartless be its dread command

VIII.

A law unto itself is a pure heart:
No monarch e'er shall dictate or restrain
Its course, or from its radiant journey part
The free-born spirit. Cowards hiss in vain
To its clear thought: their venegance brings no pain,
Their scorpion tongues it treads beneath its feet.
They pass away. Still Truth and Love remain
To make that journey beautiful and sweet,
For a pure heart is Love, and Love is infinite.

We Do Not Observe Closely Enough

I HAVE more than once urged as one of the most important reasons for substituting the use of definite active principles and pure chemical agents for the old galenic uncertainties the fact that this method leads the physician back to the more careful study of his patient, with corresponding improvement in his skill as a physician. The converse is equally true, that when the physician neglects the careful study of the single remedies in their action upon disease, he also neglects to study the patient himself.

A curious incident has just come to my eye: Mr. H. O. Hall, who is not a physician but is attached to the reading room of the Army Medical Library in Washington, noticed in a friend who had been taking digitalis for some time a curious form of delirium with hallucinations. He found that these symptoms subsided when the digitalis was stopped, and reappeared when it was again administered.

A search through the medical literature on the subject showed that of all the thousands of physicians who had been in the habit of using digitalis, in an innumerable number of cases, only one had noticed anything of the sort. This was Duroziez, who published a list of twenty instances of the kind.

After Mr. Hall called attention to this peculiar action of digitalis, in a paper in *American Medicine*, Dr. Babcock noted two cases. In one, a woman with mitral disease, there was a singular sullen moroseness with taciturnity; while the other patient, a man with aortic insufficiency, manifested a mild, harmless delirium.

Hall relates the following case:

A lady, being treated for nervous prostration and weak heart action, had a prejudice against digitalis, morphine and strychnine, especially against digitalis, asking her physicians under no circumstances to give her that drug. Some time afterward she was noticed having become very morose and exceedingly despondent, imagining all sort of strange things. These symptoms becoming more pronounced, she suspected one of the medicines that was being given

her, and without saying anything to her physician, she stopped this one. In a short time the nervous symptoms abated, she grew stronger and better in every way, and more hopeful and cheerful, and was soon up and about again. After that she spoke of her experience as an awful nightmare. Some months later, while conversing with her physician, he acknowledged that it was digitalis which he had been giving her.

Now, why is it that no physician has noticed this effect of digitalis? Simply because this drug was given with a bunch of others and no attempt was made to separate the action of the various remedies given and trace to each the symptoms to which it gave rise.

Nor is there much chance of any improvement in this respect as long as disease is looked upon as an entity to be treated by specifics, directed against disease as such. The reform we urge in therapeutics goes much farther than the substitution of one set of drugs for another. It means that the physician must go back to his original custom, must again be the physician in reality, and not the mere purveyor of specifics.

Humanity is weak and shrinks from adding to its present burden. It looks so very difficult. It is so much easier to mail a check for the serum and give it to the patient, ignoring the entire science and art of medicine for the time. But how quickly the difficulties disappear when they are faced; we then find before us a straight and unencumbered path, the shortest possible distance to the goal we seek.

DR. OSLER'S CHALLENGE

There is a fine article by Dr. William Osler on "Man's Redemption of Man"—fine in spirit, as well as fine in literary style—in the December number of *McClure's Magazine*. One item in it pleased me very much. Here it is:

"I would like to say a word or two upon one of the most terrible of all acute infections, the one of which we first learned the control through the work of Jenner. A great deal

of literature has been distributed casting discredit upon the value of vaccination in the prevention of smallpox. I do not see how anyone who has gone through epidemics as I have, or who is familiar with the history of the subject, and who has any capacity left for clear judgment, can doubt its value. Some months ago I was twitted by the editor of *The Journal of the Antivaccination League* for a 'curious silence' on this subject. I would like to issue a Mount Carmel-like challenge to any ten unvaccinated priests of Baal. I will go into the next severe epidemic with ten selected vaccinated persons and ten selected unvaccinated persons. I should prefer to choose the latter—three members of parliament, three antivaccination doctors, if they could be found, and four antivaccination propagandists. And I will make this promise—neither to jeer nor to jibe when they catch the disease, but to look after them as brothers, and for the four or five who are certain to die I will try to arrange the funerals with all the pomp and ceremony of an antivaccination demonstration."

For the information of our antivaccination friends, and to facilitate their rush to England (which we sincerely hope may follow this announcement), we beg leave to announce that Dr. Osler may be addressed in care of Oxford University, and that the steamship lines are offering very attractive rates for those desiring to cross the Atlantic during the Christmas holidays.

All happiness attend thee:
May each New Year better and richer find thee.
—Poor Richard.

ROOSEVELT AND ROOSEVELTISM

In common with the large majority of the race, we have been waiting anxiously to see what Mr. Roosevelt was going to do about it.

The situation was and is critical. Returning from a tour that has had no parallel in the history of America—or of the world—crowded with such honors as no monarch ever received and as none but a monarch ever approached even remotely, Mr. Roosevelt quickly estimated the situation here, chose his role, and threw himself into the campaign with more than his old impetuosity.

There was a rush and a hurrah from start to finish, without an instant for getting one's breath, for reflection, for estimating the effects of the work or judging the enemy's operations.

The result of all this Herculean effort was a defeat only less overwhelming than that of Foraker some years ago. Every Roosevelt partisan was snowed under, and to give a dramatic completeness to the matter, Roosevelt's own home town went against him. That capped the climax—and went beyond it. It was unnatural. Things don't happen that way, and the suspicion arises that there was method behind that bit of scenery.

Now take the hypothesis that some powers determined to squelch Roosevelt once and for all, to inflict on him a defeat so overwhelming that he might well lose confidence in himself, in his mission, in his powers of accomplishment, and even in the capability of the American people to compel reform. Let even his own home folk join in the rebuff, and he might conclude, as did Phocion of the Athenians, that the people had become too degenerate to withstand successfully the coming tyranny.

If such a thing were desired, there were ways of accomplishing it. The influences pull many wires. The approachable constitute a determining percentage of most communities, and a diligent study of any voting precinct will reveal ways of exerting an influence over enough to turn the scale, without the true location of the wire-puller being disclosed. That's politics. The "interests" need no lessons in politics.

There are other explanations. Kipling tells us we cannot "hustle the East." True, —nor yet the West. Men's views are not made instantaneously. Even Roosevelt failed to comprehend that public opinion is a matter of development and requires time for maturing to the point of action. Men grumble over the state of affairs, but need to be sure that a suggested change is going to better things before they disturb the existing order. Men who think and decide quickly and act instantaneously are liable to find themselves in predicaments, precisely as our government was when the Governor of Jamaica rebuffed our well-meant efforts at relief. Some men are like the doctor who applies

disinfectants to typhoid stools and empties them at once without giving the chemic agent time to penetrate the mass and do its work. Then there is an inertia about humanity that must be reckoned with. Many men do not want to be disturbed. Their views have been formed, they have become habituated to existing conditions, and they resent the call on them for exertion. Rarely does one escape this process of fossilization as the years roll by.

Personal interests occupy the mind—the quoit pitching back of Al. Green's blacksmith shop may prove too interesting for man to go to the polls. Then—the Athenian who ostracized Aristides because he grew tired of hearing him continually spoken of as "the Just," has many descendants here in America. The extravagant laudation of Roosevelt begets a natural instinct of opposition, and many a man who sympathizes with the demand for a square deal, and even with the movement based upon it, has asserted his own independence by voting against it.

Now, one and all, we are standing by and watching to see how Roosevelt is going to take it. Is it a knock down or a knock out? The ability to take punishment, to hit the ground hard and yet come up gamely for the next round, is deservedly valued higher than the agility that avoids the other man's fists. Battling Nelson's gameness endeared him to the public, and it was not the mauling of opponents that finished his career, but a too long season of prosperity.

Should Roosevelt come up to the scratch smiling, confident as ever of final victory, owning defeat but seeing in it only the knowledge of how to avoid another, cognizant that his cause is more important than himself, and so with faith unhurt, he will prove himself a greater man than he has yet shown himself and establish his place more securely than ever in the esteem of the people. And that place is at the head of the line. Roosevelt stands today the world's first exponent of the demand for equality of rights. No man believes he gets all that is due him. The law may declare all men free and equal, but it does not make either assertion true. Wealth and power will ever exert their influence, and the strongest will always rule their fellows.

The ideals our fathers loved were only possible when the land was open, the settlers few, the law absent, and personal responsibility alone rendered life possible. The cultivation of individual probity, of self-respect and self-reliance made the pioneer what he was; but only the pioneer environment rendered this possible. As population grows denser, the overlapping of men's rights and desires renders legal regulation essential, for natural rectitude and open-handed generosity are not thriving plants where every meal has a number of hungry stomachs awaiting it.

These changed conditions necessarily work a change in the need and in their social necessities. In advocating a stronger central government, one that could hold in check the rapacity of the powerful, Mr. Roosevelt is following history and the development of the social system. He is vindicating the foresight of Hamilton, and his Nationalism is but another name for the latter's Federalism. As Jefferson's ideals better suited his times, so do those of Hamilton better comport with those that have developed since then.

Recognizing these truths, there is no room for argument as to the desirability of the change; it is one that is forced upon us by the pressure of population and the rapacity of predatory wealth as well as by the similar traits developing in organized labor.

All these indicate the decay of public spirit and the growth of selfishness. They have always presaged the thrusting of power upon an individual. One man arises capable of wielding the power necessary to curb the greedy and protect the masses. He can not help himself. Like Caesar or Cromwell, he may refuse the royal titles, but, nevertheless, he must wield the royal powers. He is the exponent of the principle—that endears him to the masses. Under his sway there is peace for a generation, and then Tiberius rules in his stead. Or a Solomon may follow David, but then comes Rehoboam. What would France have seen had the Duke of Reichstadt succeeded Napoleon? What will Mexico endure when Diaz lets go? Now as to Kermit—

The old party names have lost their meaning and their hold on the people.

Graft is as odious under the name of democracy as under that of republicanism. The "peoples" title has become a joke—there is the "Peoples" Gas Light & Coke Company! "Nationalist" is meaningless, unless associated with the fundamental conception of the new movement. The Old World has rung the changes on "radical," "progressive," "opportunist," and so down the vocabulary. "Liberty, fraternity and equality" is but an ancient memory of a frolic that ended in a riot; and, yet, the three rather indefinite terms touched the heart of the matter and were comprehended as seeming the ardent desires of humanity. They represented the antithesis of the prevalent selfishness, the altruistic sentiment, that for which Buddha, Jesus, Mohamet and every other great religious and political leader contended, the one correction of the woes of man.

This is Rooseveltism, as it is Christianity. It is the cry of humanity for an even chance, a "square deal," a clear field and no favor. It is the Party of Right, of Justice, of Conscience, in a word, of the Golden Rule. Yet neither of these words suggests the title that leads to success, the catchy name that everybody comprehends on the instant and which appeals to the heart so that it rushes torrentially to success like "Old Tippecanoe and Tyler too"—the log-cabin and hard-cider hurrah.

Good politics lies behind the designation of The American Party, and it is not easy to supply a better. Insurgents and anti-this or anti-that are bad, as no enthusiasm or great success attends a negation.

Take it all in all, nothing has been yet suggested that so graphically expresses the idea as Roosevelt's own, the Square Deal. So, Square-dealers, let us be until the genius arises who supplies a better name.

A STORY OF EPHRAIM McDOWELL

In Dr. W. D. Haggard's fine address of welcome at the last meeting of the Southern Medical Association, held in Nashville in November, he told an interesting story of Dr. Ephraim McDowell, the great country doctor who was the first man to perform the operation of ovariectomy upon a human patient:

"It may be unknown to some of you," said he, "that in the neighborhood of the Hermitage, where we hope to take you on Thursday, Ephraim McDowell in 1822 performed his ninth ovariectomy, a score of years before the profession knew that such a thing was possible. He rode horseback from his home in Kentucky and no less a personage than Gen. Andrew Jackson assisted him at the operation. The patient was a Mrs. Overton, who thanked God and honored Dr. McDowell for her recovery.

"When the surgeon presented the check which her husband had given him, at the little bank on the Public Square, the cashier counted him out \$1500. He returned the money, saying he had told Mr. Overton that his bill was only \$500. A runner was dispatched to the Hermitage, who returned with the message from the husband saying that he had understood the amount of the Doctor's charge, but had tendered him this additional honorarium with his thanks and with the earnest request that he accept it. This is a feature of surgery, I regret to say, that is not practised in Nashville at the present time."

How slowly the world does move! In these enlightened (?) days how many men are there who are willing to put their gratitude on a cash basis?

Another year ahead—another twelve months of opportunity in which we can study more, think more, work more, accomplish more, help more. What is our year going to be? Is it to be filled with wasted opportunities or rich in accomplishment? From this moment—let's all get busy!
—W. C. Abbott.

FLEXNER AND HIS ALMA MATER

Score a bullseye for *American Medicine*!

Since Abraham Flexner, in his Carnegie Foundation report, has unsparingly castigated nearly all of the American medical colleges, Editor Lewis has had the curiosity to look up the scholastic maternity of Abraham's brother Simon, who, as everybody knows, is the distinguished director of the Rockefeller Institute. He was surprised (and pleased?) to learn that Brother Simon was graduated from the Medical Department of the University of Louisville in 1889, an institution about which Brother Abraham has said some very uncomplimentary things.

Even in these modern days we are informed by the Carnegie-Flexner report that its laboratories are "inadequate in appointments and teaching force"; that "its plant is unequal to the strain which numbers put upon it"; that the clinical facilities are "meager"; that a large attendance is "necessary" and this "large attendance implies a low standard."

We also learn that "in the old days, Louisville with a half-dozen 'regular' schools, was a popular medical center to which crude boys thronged from the plantations." Can it be possible that our own and only Simon was one of those "crude" boys? If the Medical Department of the University of Louisville is as bad today as the Carnegie Report paints it, with Editor Lewis, we "shudder to think of it in 1889 if what Brother Abraham says about it is true."

There is an old epigram that we should "praise the bridge which carries us over," and even if Brother Simon does feel rather inclined to shy bricks than to send flowers to his alma mater, in deference to the proprieties we suggest that it might be advisable for him to put a muzzle on Brother Abraham.

On the other hand, while it is not quite true that the college "makes the man and the lack of it the fellow," it may help wonderfully in shaping up the raw material—and hence, the better the college the better the man. Now, if Simon Flexner had been medically trained at Harvard or Johns Hopkins——? But we leave the speculation to Editor Lewis.

It's a pretty good scheme to be doing some choring around while you can; for the gods with their gilts are pursuing the earnest industrious man; and these gods, in their own El Dorado, are laying up wrath for the one who loafs all the day in the shadow while others toil out in the sun.—Walt Mason.

THE GRAPE-FRUIT AS A LIVER INVIGORATOR

Passing along the street, I came face to face with the greatest ophthalmologist America has yet known. As soon as he saw me he threw up his hands with a delighted smile, exclaiming: "The sight of you reminds me that shaddocks are in market."

Some time previously I had advised the use of this fruit. My friend had a liver, or

rather I should say that at times his liver had him, with results that were not pleasant either to himself or those with whom he came in contact. He had found this fruit an exceeding efficacious remedy for his digestive difficulties.

The shaddock, pomelo or grape-fruit, is rapidly taking a place as the most popular fruit produced in our country. It takes a little time for one to become attached to it, the bitter twang at first deterring the user, but in a very short while one grows accustomed to this, and after that finds it delightful. Even an orange tastes musty after one has become familiar with the indescribable freshness of the grape-fruit.

The bitterness depends upon the presence of an alkaloid, nectandrine, which, however, has never been isolated for experimental use as a medicine. One can only judge of its effects from those of the fruit in which it is found.

Here is a personal experience. Some years ago, when I commenced to find that three meals a day weighed too heavily upon my gradually subsiding digestive capacity, I commenced taking a grape-fruit in place of anything else for breakfast. I found that when I used the grape-fruit in the morning, I could work until noon or half an hour longer before having lunch, without any sense of relaxation or debility. But if an orange was substituted for the grape-fruit, by eleven o'clock I would be "all in," and compelled to get something to eat or stop work.

A very decided tonic effect ensues from the following procedure: Cut a hole in the end of the shaddock and squeeze out the juice, then fill the shell with water, and let it stand from morning until noon, when the infusion thus obtained may be used as a pleasantly bitter beverage with the lunch. The tonic effect is most decided. No special laxative action is experienced from this any more than from other fresh fruit, excepting that the nectandrine appears to contribute a slight degree of added tonicity to the intestinal musculature, peristalsis being slightly increased. This, however, is exactly what many aging persons need.

Quite recently a very distinguished medical friend informed me that he found the saline

waters losing their effect, so that a whole tumblerful of Apenta or Hunyadi water was no longer sufficient to move his bowels. Believing that the difficulty was simply a sluggishness of muscular action, he was advised to take the anticonstipation granules, each of which contains aloin, gr. 1-25; strychnine sulphate, gr. 1-500; atropine sulphate, gr. 1-2500; oleoresin of capsicum, gr. 1-500; emetin, gr. 1-500; bilein, gr. 1-250. He took three of these granules, two hours apart, and within an hour after taking the third one his bowels moved almost before he could reach the toilet. After this, one granule a day, divided into four parts, proved amply sufficient to regulate his bowels.

Here was a case in which the grape-fruit would probably have sufficed for the need, the slight stimulation of peristalsis being all that was required.

It is prudent not to be too hard upon the past, because thus we may predispose those who come after us to show us a little indulgence.—Richet.

DOES THE DISPENSING DOCTOR DISPENSE CHEAP DRUGS?

An article by Prof. James H. Beal, which appeared recently in *The Midland Druggist*, has been reprinted by practically every pharmaceutical journal in the country. Beal undertakes to explain "Why Dispensing Doctors Use Poor Drugs."

This paper is a record of conditions found by the author "several years ago" and therefore cannot honestly be said to apply to the present state of things. His revelations all antedate the passage of the National Food and Drugs Law and of the strengthening of the state drug laws to correspond thereto. *The Medical World*, in a very strong editorial in its November issue, points out the manifest injustice of the Beal article. After showing that the conditions possible some years ago cannot now exist, Dr. Taylor very properly says:

"This is not the way to heal the breach between the druggist and the doctor, and such healing is the desire of the better class of men in both professions. It was not intended for this purpose; it was intended to

inflame sentiment, to the end that sometime it will be possible to pass a law preventing physicians from dispensing their own drugs. Such attempts have been made already and will be continued. The medical profession needs to be informed on the condition of affairs in regard to the systematic and continued effort that is being made to deprive them of the right to dispense."

Prof. Beal shows that there were, at one time, a few physicians in the State of Ohio who were using very poor drugs; that some of these men were absolutely filthy in and about their offices; that there were drugs sold to the dispensing doctors "for less than the wholesale price of the ingredients;" that there were doctors who were dishonest in the selection and administration of remedies; and, of course, that there were some who were woefully, yes, almost criminally ignorant. The implication, upon which the plea for antidispensing legislation must be made, is that these conditions are *now* common among the physicians of Ohio.

What robs Prof. Beal's argument of its value is the fact that not only do the facts submitted apply only to things as they were years ago, but also that he has failed to set side by side the condition of the dispensing doctor's drug cabinet and the condition of the prescribing druggist's supply of prescription material. He submits no evidence as to the quality of the galenic preparations carried and sold by the druggists of Ohio.

We would suggest that if this discussion is to be carried out in the spirit of absolute fairness, that it would be wise to make careful studies of the remedies found on the pharmacists' shelves. We surmise that some very surprising things might be learned thereby. We respectfully refer Prof. Beal to the investigations of the tincture of aconite instituted by the Kansas State Board of Health, the results of which were published in its Bulletin No. 12 of this year. Here is something which is official, strictly up to date, and requires no exploration into the private records of the prelegislative era. Of 57 samples (using Squibb's tincture as the standard), it seems that not one was up to standard strength—the nearest being 50 and the next 34.7 percent. Of these samples, 18 were between 5 and 10 percent, and

11 were below 5 percent in strength. (See CLINICAL MEDICINE, NOV. 1910, p. 1235.)

To the fair-minded physician, it must seem very apparent that "the kernel" of this nut of contention is not the monopolization of the dispensing of drugs, either by doctor or druggist. *What we want is good drugs, drugs that are always active, always to be depended upon, and always readily accessible when the physician needs them.*

Finally—get a copy of the November *World* and read Dr. Taylor's editorial.

Dreams alone will not bring success; but dreams plus an abiding hope, plus unceasing work and plus an unyielding will shall bring it about.—A. S. B.

A RATIONAL VIEW OF THE DISPENSING QUESTION

It is refreshing to pick up a druggists' journal which really takes a rational view of the question of dispensing on the part of physicians. Such a journal is *The Druggists' Circular*, and we wish especially to commend the first editorial in its November number. While strongly (and properly) supporting the economic interests of the drug trade, it is eminently fair. We wish we had room to reproduce it in its entirety.

The editor of *The Circular* says:

"We are of the opinion that it is not feasible, and would not be fair to the public, to have a law passed prohibiting a physician from administering to his patients such remedies as he might see fit, when and where and in any manner his knowledge and skill might dictate. We do not mean by this that physicians' drugs should not be subject to legal inspection, and to condemnation if their quality demands it, or even that all physicians are worthy to be trusted to diagnose the disease with which a patient may be suffering, and dispense the remedy for the same, and then to issue the death certificate—when one is necessary. These are matters for further consideration. What we do mean is that the physician himself, at the bedside of the patient, is the only person who can decide what medicine, if any, the case demands, and whether the demand should be met at once, by means of supplies at hand, or otherwise. To speak of robbing the physician by law of his right to adminis-

ter remedies to his patient is puerile, and to undertake to put such an idea into execution would be preposterous."

Passing to the discussion of the question of cheap and impure drugs, which physicians are supposed to dispense in considerable quantity, the editor says that "it is a fact that the physician himself is the final arbiter of what is best for his patient" and that "it is difficult for the law to assume to say even what quality of drugs he should carry in stock and, as it seems to us, out of the question for it to try to dictate when and in what dilution or combination these drugs should be administered."

Certainly nothing can be more unpromising than this statement. As we have repeatedly stated, we believe in proper state and national regulation of the quality of drugs sold by retailer, wholesaler and manufacturer, no matter whether the purveyor markets his goods to layman or physician, the essentials being that the remedies themselves shall be of uniform quality, of known composition, and that when given medicinally they shall be efficient.

In regard to the movement to take away by law the right of the physician to dispense, the editor of *The Circular* says:

"If it is the desire of pharmacists to confirm the physician in his habit of dispensing, then by all means let them antagonize him in every way they can think of, including appeals to the legislature. Human nature is a most peculiar and contrary thing; often it has been found that nothing will so influence men to continue in a certain course as a knowledge that somebody whose motives they question and whose authority they do not recognize is trying to compel them to leave that course. Not only does it seem to us to be useless for druggists to antagonize physicians in the matter of dispensing or in other matters of common interest, but it seems suicidal. Granting that there are today many physicians dispensing who would prefer to prescribe if there were not some real or fancied reason why they should not, the thing for the pharmacist to do is to discover that reason and remove its foundation or prove its inadequacy."

This goes right to the heart of the matter. After all, the main factor in success in the

drug business, or in any other business, is efficiency; and it is certainly true that the pharmacist who can "show to the physicians in his vicinity that he is competent, trustworthy and cognizant of his duty as a professional helper" will be most certain to win the business support and professional co-operation of the physician. On the other hand, it is just as certain that the druggist who openly or insiduously antagonizes the physicians is sure sooner or later to lose not only their support but the business of a considerable portion of the community.

The dispensing question is not one to be settled by recourse to law. It is an economic one. The druggist who earnestly seeks to make himself competent, tries to learn the physician's requirements, his likes and dislikes, and prepares himself with stocks to dispense just the things which the physician wants, when he wants them, and in the way which he demands, will not have to turn lobbyist to get the friendship and the patronage of the medical profession.

STANDARDIZING CARDIAC DEPRESSANT DRUG EXTRACTS

Githens and Vanderkleed contribute to *The American Journal of Pharmacy* some interesting data on the physiologic standardization of various galenicals from cardiant drugs. Their studies include the group containing aconite, gelsemium and veratrum; and another allied group including physostigma, lobelia and conium, which act chiefly on the voluntary muscles and kill by asphyxia.

With all these drugs toxic manifestations occur from comparatively small doses, whereas with the digitalis series a dose slightly less than the toxic one causes but slight phenomena of poisoning. The dosage of the cardiac depressant is, therefore, less sharply defined, and an arbitrary period of time must be fixed within which the experiment-animal should be expected to die. This period has been fixed at three hours.

These depressants also produce evident effects if given in less than lethal doses. Thus aconite induces violent retching, gelsemium, convulsions followed by paralysis, while veratrum stands between these two.

The preparations from respiratory sedative drugs could all be standardized by their alkaloidal content, but with the aconite group their physiologic activity is not necessarily regulated by their alkaloidal strength. The aconitine is liable to split off a methyl or benzoyl group during the preparation of galenicals from the root, whereby this alkaloid becomes inactive although responding to chemical tests. This is especially likely if the aconite has been kept a long time. Veratrum contains one active and several inactive alkaloids. Gelsemium contains gelsemine and gelseminine. The former has little effect on mammals.

Hence it is that for the drugs named, standardization must be physiologic rather than chemical. The tincture of gelsemium was found much more toxic than the fluid extract, on the basis of equivalent amounts of total alkaloids. With aconite just the opposite result was obtained. It seemed that the percolation occurring with tincture of gelsemium dissolved out much more of the intensely active gelseminine. The activity of veratrum preparations agreed closely with the percentage of alkaloids present.

"Ego liberam medicinam profiteor; neque ab antiquis sum, neque a novis. Utrosque ubi veritatem colunt, sequar."—Baglivi (1669-1706).

THE PASSING OF MRS. EDDY

Mrs. Mary Baker Glover Eddy, the founder and discoverer of Christian science, that fashionable and meteoric religious fad of the last two or three decades, "passed on" the evening of December 3. Her death was not announced until the following day, at the regular Sunday services of the "Mother Church" in Boston. No physician was in attendance during her last illness, but the official who was called to sign the death-certificate, after a superficial and perfunctory inquiry, certified that she succumbed to "old age," tempering this inanity with the statement that pneumonia was a contributing cause. According to her attendants, Mrs. Eddy had been "in error" for about ten days. Secrecy or reticence (as you will) characterized the sickness and death (as it had the last few years of the life) of this

aged woman, who was nearly ninety years old at the time of her demise.

De mortuis nil nisi bonum! Mrs. Eddy was one of the most remarkable individuals of her generation. It is not the time to question the ideals of this woman, to discuss her philosophy or to analyze her writings. It is sufficient to remember that she had a character strong enough and an intellect broad enough to impress her strange ideas, ideas that must seem bizarre, grotesque and illogical to every truly scientific man—ideas that went exactly counter to the spirit of rigorous inquiry of the times—upon the minds of thousands of seemingly intelligent people. The sect that she founded has grown with marvelous rapidity; just how many adherents there are today no one seems to know, but the number is placed (probably conservatively) at at least one million.

While Mrs. Eddy's ideas were, we believe, unsound and dangerous, both in their tendencies and their practical application, we freely and gladly admit that there was much good in them. Anything that has brought hope to the sufferer, whether from real or imaginary disease, and has removed something of that dreadful incubus of fear, can not be unstintingly condemned.

Whether we feel inclined to admit it or not, the medical profession has learned (is still learning, we hope) a lesson from Mrs. Eddy. Her teachings, directly or indirectly, have helped to swing the pendulum backward from the uncompromising materialism of the times. It was the competition of Christian science that stimulated anew inquiry into the mental factor in disease, and it was the excuse for the Emmanuel and other similar movements. The optimistic, hopeful business and professional philosophy, so much in evidence now, is the grandchild, if not the child, of her thought.

Will the death of Mrs. Eddy mean the subsidence of the sect which she founded? No one can tell. Certainly not with the same rapidity as has been the case with the religious founded by other "prophets," such as John Alexander Dowie and Dr. Cyrus Teed. Mrs. Eddy left behind a splendid organization, of which she was *not* an essential part. Her living personality

has been gradually replaced by a spirit of reverence—constantly instilled—for her book. She has been placed at a distance, remote from her followers, made a saint of—and "saints" are revered even more when dead than when alive. But there is always the probability that when the overmastering will, which is able to quell revolt immediately, is gone, that discord will come in—and discord will mean death to Christian science. Eventually there may and probably will be other Mrs. Stetsons aspiring to leadership, and those to rise up may not fail in their ambitions.

There are diseases that cannot be cured without friendship, patients that will never get well unless you can get them to make a success of something or to conquer their own self-absorption by a self-devotion, losing their life to find it.—Richard C. Cabot.

WHY THE SUCCESS OF THE CHRISTIAN-SCIENCE CULT?

The following of the Eddy cult, we remarked above, is very largely of the more intelligent stratum, and this phenomenon has been to many thinking observers somewhat of a puzzle. But this seeming paradox can, we think, be explained.

Nearly all the intelligent world has absorbed the modern scientific spirit, recognizing cosmic orderly law as supreme and evolution as an undoubted fact, the consequence of which has been a loosening of the hold upon them of the orthodox religious beliefs and tenets. But mankind, as a whole, is fascinated by the mystical and seeks for something definite to lay hold of—mere philosophical abstraction cannot satisfy its longings. Hence, after drifting on the sea of doubt and helplessness, the more emotional and poetically inclined among the half-educated (and that means the majority, perhaps) embrace anything new that comes along that *seems* to explain existence to them, yet which they cannot clearly analyze. (If it is clear, it no longer charms.) So, every new prophet has his vogue; but, also, many drift, anchorless, from one belief to another.

This will explain Dowie, Teed, Schweinfurth, Beilhart, Schlatter, and all the rest. But the more highly cultured and in a measure gifted, though lacking in acute reasoning

power, naturally are captivated, the more philosophic, by theosophy; those less gifted, by Christian science. And the latter cult has so wonderfully outstripped the rest because, instead of promising a pleasant hereafter, it concerns itself with the here; because it vouchsafes health and wealth—is not a real religion enjoining personal restrictions, but a system of selfish material welfare eliminating sympathy with others.

Moreover, it is this very same class of individuals—comparatively high-strung and of neurotic tendencies—who will be more generally benefited by suggestive and tranquillizing influences, since they are the ready victims of nervous disorders and their numberless consequences, and which are the kind notoriously cured by mental healers.

I am much disposed, the longer I live, to set less value upon mere cleverness, and to think that the power of endurance, with persistence, is the most valuable of all.

—Huxley.

THE DEATH OF TOLSTOY

Could there be a greater contrast than between the deaths (as there was between the lives and teaching) of Mary Baker Eddy and Lyof N. Tolstoy? The former had surrounded herself with every luxury; her home was a modern palace, provided with every convenience that could add to her personal comfort; her food was the most choice; she was clothed in rich gowns, rare furs and dainty linen. She cloistered herself away from the sight or suggestion of poverty, unhappiness or pain and shut them out of her life—to the very end.

The latter sought with all the intensity of his passionate heart, crushed and bleeding at the world's suffering, to get away from the wealth that was his by right of birth and position; he dressed like a peasant and lived on the coarsest food; and when the hour of death drew near fled from home and family and all the comforts that the world calls good and passed away in an out-of-the-way railway station like a simple moujik—but not alone, since his favorite daughter and faithful physician were with him at the end.

In the philosophy of Mrs. Eddy the great good is the achievement of "health, wealth and happiness." Her disciples are taught

to deny the reality of evil, and their ideal seems to be a smug and self-centered content in which real sympathy with others is impossible since they are denied the privilege of suffering in a brother's misfortune. Tolstoy thought mere personal happiness an unworthy end. To him there was, as Howells tells us, no joy like "the heavenly rapture of a supreme act of self-sacrifice." The great problem of the world was suffering, which, however born of weakness and immorality, was in its last analysis the fruit of poverty, and this the product of human injustice, nowhere more striking than in Russia.

Tolstoy sought literally to live like Him who "hath borne our griefs and carried our sorrows." For him the solution of the world-problem was the Christ-life—so he tried to live it. It was impossible to effect a cure of evil without understanding the disease—so he was constantly trying to tear away the veil of falsehood from society and get at Truth in all her nakedness.

In all Tolstoy's later writings there was the current of protest against the injustice of society, which gave every pleasure to the few, every pang to the many. In his arraignment he always began at home. His latest booklet, "Three Days in a Village," which was suppressed by the Russian government, was a realistic description of the suffering on his own estate—a suffering that he was powerless to relieve, but which nevertheless cut his sensitive heart to the quick and was probably the direct cause of his leaving home and, indirectly, of his death.

In this practical age Tolstoy's teaching may seem irrational and the self-imposed martyrdom of his later years futile—but who knows? As a writer in *Current Literature* says: "What an eloquent protest to the world is this irrational act, and how it shrieks its way around the whole habitable globe!"

GIVE YOUR DIRECTIONS IN WRITING

The difficulty which our patients, or the members of their families who may be charged with their care, experience in remembering the directions of the physician, even though the directions for taking medicines may be written on the bottles or boxes,

has frequently given rise to undesirable mistakes, if not to very unfortunate complications and occurrences.

The writer was forcibly reminded of this on reading the following remark in a paper by Dr. Edmond L. Cocks, in the *Medical Record* for December 3:

"My experience in consultation practice shows that the physician, with his professional mind, finds almost the same difficulty in remembering directions as do the untrained parents; and surely our nurses are entitled to forebearing when the physician's inability to grasp all the important points is kept in mind."

This remark is pregnant indeed and affords food for thought. It has frequently happened to every practising physician, even though he may not be excessively busy, that he could not for the life of him remember just what he had given his patient, and if he does, how he had directed his patient to take the medicines. Small blame, then, to the patient if he should experience more or less forgetfulness, and small blame to the anxious mother, if the patient is an infant, if she should get mixed up in remembering about the various medicines that may have been prescribed or left by the physician himself. Especially in the case of dispensing physicians, the temptation is great, in the hurry too frequently attending the end of a sick call, to place a few granules in one saucer and a few of another kind in a butter-dish, and to order these to be taken every half hour and the others before meals or after meals, as the case may be, until such and such a thing shall happen. If the mother dares to ask the physician to repeat his directions, he may, in his hurry to be gone, become impatient and throw out some gruff directions, leaving the poor mother in a worse than doubtful frame of mind. Especially is such a proceeding to be condemned if powerful remedies like aconitine, atropine, strychnine and digitalin are to be administered, and if they are to be continued until certain symptoms either are removed or are to appear.

There is absolutely no excuse for any physician, and especially for a dispensing physician, to give verbal directions, and the writer was pleasantly impressed quite recently in a

Chicago hospital in which he had never before had occasion to treat patients, when the nurses, on every single visit, insisted on receiving their directions in writing and when they made sure that they had understood his directions completely and fully. This is as it should be, and the writer has for years made it a practice, especially when he dispensed active-principle remedies, to write out full directions, not only as to how the different medicines should be given, but also how certain mechanical modes of treatment, such as sponging, enemas, ointments, liniments, should be administered and even when and how the patient should be fed.

These directions written on slips of paper of a convenient size, not only assured their being fully understood by the attendant but also served as a record of the case, together with the notes which the writer is in the habit of taking on 3x5 cards at the bedside. There can be no doubt about the importance of taking full records of the cases we treat, of keeping copies of the prescriptions we write, and of giving to our patients or their attendants full directions concerning the medicines and other remedial agents which we order for the purpose of leading them back to health.

"He needs no ship to cross the tide,
Who, in the lives around him, sees
Fair window-prospects opening wide
O'er history's fields on every side,
Rome, Egypt, England, Ind and Greece.

"Whatever moulds of various brain
E'er shaped the world to weal or woe,
Whatever empires wax and wane,
To him who hath not eyes in vain
His village-microcosm can show."

AN UNNECESSARY SACRIFICE

One of our newspapers, *The Chicago Journal*, recently published an editorial upon the increasing death-rate from pneumonia. While a single death from pellagra in our county institutions at Dunning, or a small epidemic of infantile paralysis in some Iowa village, is reported by the newspapers and discussed by the medical journals all over the country, yet an editorial like this, setting forth an exceedingly serious situation, creates hardly a ripple of comment. The writer says:

During the first ten months of the current year, 4603 persons died of pneumonia in Chicago.

Deaths from this cause exceeded those from tuberculosis, typhoid fever, diphtheria and scarlet-fever combined.

If a plague, like yellow-fever or the Asiatic scourge, should claim that number of lives in the same period, the city would be aroused to the most desperate measures to check the disease.

But more than 5000 people die annually from pneumonia in the city and the fact is taken as a matter of course.

This sacrifice of life is unnecessary. It is even criminal. Pneumonia can not be prevented in all cases. But its ravages can be minimized by right living and observance of ordinary precautions.

The cold, which is the advance agent of most cases of pneumonia, easily can be checked in its incipency. Carelessness in this respect is the most liberal contributor to an appalling death list.

Also, the man who fortifies himself against the germs by a cold sponge and a vigorous rub-down in the morning, and who cultivates a liking for fresh air at all times, seldom will be troubled by the bacilli which blaze the way for this deadly disease.

What would happen if the plague should find a footing in Chicago and kill off 5000 people in one year? Or if the same number of deaths were due to an epidemic of small-pox or cholera? There would be a panic. Business would be at a standstill. The city would be quarantined, and all the energies of our national, state and municipal health organizations would be concentrated upon the problem. But pneumonia? Everybody seems to look upon it with indifference.

As *The Journal* says, this sacrifice of life is unnecessary—"even criminal." A large percentage of cases could be prevented by hygienic living, while a still larger percentage could be arrested in their incipency by energetic treatment.

Pneumonia is not necessarily a deadly disease, in spite of all the teaching of the books. We make the statement unreservedly that in the vast majority of these cases those attacked can be cured, providing the doctor applies to their treatment a judicious mixture of scientific knowledge and common sense—with a preponderance of the latter.

The essentials are to secure as nearly as possible an equable and normal distribution of the blood, thus relieving the congestion of the respiratory centers, and to remove the poisons—those of the disease and the alimentary poisons as well. These things done, the fighting forces of the body will rise in their might and repel the invading bacterial army.

As to "just how" this may be done and with what degree of success, we refer you to the Miscellaneous Department in this issue, where a few of the great army of men who *are curing pneumonia* have something to say.

"606"—THE OTHER SIDE

In an article appearing on another page of this number of *CLINICAL MEDICINE*, Dr. B. C. Corbus, who made a special trip to Frankfort last July, gives an interesting sketch of the early life and personality of Professor Paul Ehrlich and tells how his now celebrated specific for syphilis, dioxycarbonyldiamidoarsenobenzol (commonly known as "606") came to be discovered. Every physician of the 50,000 who will receive this number, should read this article.

The medical journals (especially the German weeklies) are filled with reports of clinical tests of this interesting remedy. That the great German thinker has made an epoch-making discovery of far-reaching significance to mankind can no longer be doubted, and, naturally, the majority of comments are glowingly favorable. But it should be remembered that this is the history of every new remedy which is backed by a great name in its discovery. We only need to recall the introduction of tuberculin by Koch.

Under the circumstances it may be well, perhaps, to remind our readers that all the reports are not glowing; there is decidedly another and unfavorable side to "606." In 14,000 cases now reported as having been treated by this remedy there have been fourteen deaths, while a large number of unfavorable side-actions have been observed, among them great pain, decided elevation of temperature, suppression of the urine, albuminuria, blindness, disturbances of co-ordination, local necroses and gangrene, paralyses, rapidity and irregularity of the heart's action, softening of the cerebral lobes, besides a number of others. For instance, there exists a not inconsiderable danger in the toxemia produced by the toxins liberated by the spirochetes destroyed by the remedy. Some of these unfavorable actions, it is true, are attributed by Ehrlich to the methyl-alcohol used with the injec-

tion, and he thinks that in only one of the fatal cases could death be attributed to "606." Nevertheless, it is now generally admitted that the remedy has certain inherent dangers.

The preparation is contraindicated, according to those who have had large experience with it, where there is weakness of the heart, disease of the blood-vessels, affection of the optic nerve and nerve degeneration. In view of these disturbing reports it is said that Ehrlich has prepared a new compound, known as "hyperideal."

French experimentors are (naturally, perhaps) much less enthusiastic about "606" than German physicians. Bayet, after an experience with one hundred cases, thinks it a more active remedy than mercury, but says it fails in certain cases of primary and secondary syphilis, offers no guarantee against recurrences, and has scarcely any effect upon the Wassermann reaction.

Brocq, of the St. Louis Hospital, compares the results obtained from "606" with those obtained with mercury when employed in a thoroughly modern way, and the advantages are not all on the side of the new compound. He sums up the relative advantages and disadvantages of the two, according to *The Journal of the American Medical Association*, as follows:

"Its efficacy is sometimes, perhaps, superior to that of good mercurial treatment in moist syphilides, in precocious malignant syphilides, and in tertiary ulcerations of the mucosæ. It is almost equal to that of mercury in certain roscolas and in acneiform and tuberculosquamous syphilides. No longer periods of immunity from complications seem to be afforded by arsenobenzol than by good methods of mercurial treatment. It seems, then, that the new remedy ought not to replace mercury and the iodides in the treatment of syphilis, all the more since the contraindications to its use are so important that the detractors of the remedy say that arsenobenzol is a remedy for syphilitics who are rather healthy."

A considerable number of investigators now express serious doubt as to the possibility of entirely destroying the spirochete at a single injection. One writer points out that it is extremely unlikely that this remedy

can penetrate the tissues sufficiently to reach many of the parasites which are practically encysted, and so long as these are unreached the disease is certain to recur. While there is a possibility that these parasites might be destroyed by second or later injections, Marks shows that with each subsequent administration of the drug the difficulty of destroying all becomes more unlikely on account of the development of a strain of parasites which have become accustomed to the agent and are to a greater or less degree immune. It was for this reason that Ehrlich sought a remedy powerful enough to render the entire organism "sterile" at a single dose.

Nor are the diagnostic tests to determine the destruction or survival of the parasite entirely satisfactory. At the demonstration of "606" at Michael Reese Hospital in this city, Dr. W. T. Belfield related a case in which samples of blood from three different syphilitics were sent to three different German experts to test for the Wassermann reaction. Each rendered a report. A few days later these same men were sent samples from the same patients and every man reversed himself.

Kaplan, in *The Journal of the American Medical Association*, December 3, 1910, says: "The impression that I have received from almost two years' work on this reaction and the benefits that physicians and patients derive from its application is that the value of the Wassermann test for diagnosis and therapy has been greatly overrated." It seems, therefore, that the statement that following the injection of "606" the Wassermann reaction has become negative should not always be taken too seriously.

We give this review of some of the discouraging features relative to "606," not in a spirit of criticism nor because we lack faith in the great achievement of Prof. Ehrlich, but because we believe that being forewarned the practitioner will be spared much subsequent disappointment.

As to the value of the preparation there is little doubt, but from the present evidence it seems unlikely that it will entirely replace mercury and other well-tried remedies in the treatment of syphilis. Indeed, at the last meeting of the German Naturalists and

Physicians, Prof. Ehrlich laid considerable stress upon the fact that "606" was not intended to replace the mercury and iodine and suggested that a combination treatment might probably become desirable. Time and the experience of many physicians alone can determine the field and future of this remedy; but we have faith—much faith. The general practitioner can well afford to wait until the pioneer work is done by investigators and specialists before rushing to put his patients on "606." In mercury, we have a remedy the efficiency of which cannot be doubted. To dislodge this well-tried specific, one of the few real specifics known to medicine, the evidence concerning "606" must be absolutely convincing to the thoughtful man.

"Be not the first to lay the old aside;
Nor yet the last by whom the new is tried."

Here! you discontented knocker,
Growlin' 'bout the country's ills;
Chloroform yer dismal talker;
Take a course o' liver pills.
Stop yer durn ki-o-tee howlin',
Chaw some sand an' get some grit;
Don't sit in the dumps a growlin',
Jump the roost
An' boost
A bit!
—From "Backbone."

WHY NOT THE COUNTRY?

Why is it that the young men graduating from medical schools, so many of them, and especially those who have taken the honors and have had practical hospital experience, are so anxious to settle down in the large cities?

In the city the big prizes are few. Take Chicago. Here there are between 4000 and 5000 physicians. Of these, probably one hundred enjoy a national reputation. Of the one hundred, perhaps ten are earning from \$25,000 to \$100,000 a year; twenty-five to fifty more are making from \$10,000 to \$25,000 annually, and the remainder of the hundred somewhere between \$5000 and \$10,000. The number of city practitioners who are earning in excess of \$5000 annually is undoubtedly very small; in my opinion, not to exceed ten percent are doing thus well.

The cost of living and maintaining the social position necessary to a large practice

is very great. Five thousand dollars a year in Chicago or New York is not the equivalent of three thousand dollars a year in country towns. The man in the country not only has a decided advantage from a pecuniary point of view, but he becomes more closely identified with the social and business life of the community in which he dwells, and I believe that his life on the whole is a happier one. Nor is he denied a chance at the great prizes in medicine. If he has ability, genius, skill and determination enough, "no pent up Utica" need confine his powers.

The country doctor is no longer the man with little education—the "hayseed." Everywhere the people are demanding men of attainments; the time is not far distant when the country doctor must be just as scientific a man, just as finely equipped, just as competent to deal with all the emergencies that may arise, as the one practising in the city. Thousands of competent doctors, brilliant men who know their business and know it thoroughly, are living from hand to mouth in the city when they might be making fortunes and reputations in the country.

There are plenty of good openings in the smaller towns and yet it seems difficult to get the right kind of men to take them. A few months ago there came to us a call for a physician in a small and prosperous railroad town of about five hundred inhabitants. There was not a doctor there—just the place for a bright young graduate. A good man could easily make \$2000 a year from the very start. We published the facts and a number of the young men from Chicago colleges came to see us. But this place was four hundred miles from State Street! They didn't want to go. So far as we know the people in that little town are still looking for a medical adviser.

Several months ago an Iowa physician who has built up a practice amounting to nearly six thousand dollars annually, and who has made a comfortable fortune within the last ten years, wrote us that his eyes were failing and he wanted a bright man (an alkaloidal man, by the way) to take his place. He insisted, however, that his successor must be thoroughly skilled in his profession, prepared to do any kind of work, medical and surgical. Not much money was required.

Could we find a man in this great city of ours who was content to go out in the country and do this work? We could not!

Just a few weeks ago we received a letter from a Pennsylvania doctor who had built up a splendid practice in the mining regions, bringing him in about five thousand dollars a year. Owing to his wife's failing health, he desired to go to a warmer climate. He wanted a successor. Thus far we have found no man suited to take his place.

We say frankly that these openings are not for everybody. They involve unusual ability and skill. If, however, you are a high-class man, here are excellent opportunities—and these are only two. There are undoubtedly many other opportunities equally as good. Some of them, it is true, require money, but all give promise of large returns on the investment—far larger than the average man can ever hope of receiving in the city.

Now, brother city doctor, you who are hanging on by your eyebrows, why don't you break away and get out into God's great out-of-doors, where there is health, wealth and opportunity. One Chicago doctor I know of is now prospering in Wyoming as he never had nor could expect to do in Chicago—and he loves it. Maybe you would too. Think it over.

Have faith in your fellow men and seek and work strenuously to instill in them faith in you. The home of the Things Worth While is built upon the rock of Mutual Confidence.—W. C. Abbott.

LONG LIFE

As men grow old and the shadows lengthen, nothing interests them more than the occasional items in the daily press referring to individuals who have far outpassed the traditional three-score years and ten. It is certainly comforting to us who are approaching this period to read of men who have reached 150, or 140, or even as high as 110 years. It makes us feel really young; and we may be pardoned for indulging in some youthful friskiness when we hear of Sophia Gab at 129, or Noah Raby at 132.

Unfortunately, as age advances and experience multiplies one acquires a well-founded dubitation as to the strict veracity of the

reporter, and an investigation is apt to show these suspicions to be only too well founded.

Dr. Cressy L. Wilbur, of the Division of Vital Statistics in the Census Bureau, has been investigating these great-age rumors, and he finds no sufficient evidence to justify them. On the contrary, he is compelled to lop off some thirty or forty years from the current reports, such as the two above mentioned. Nevertheless, there is abundant evidence that by taking thought we can add, barring accidents, many years to what would have been our limit without such forethought.

Burggraave based his personal treatment on two principles, the regulation of vasomotor equilibrium and the prevention of fecal toxemia. Each night he took three granules, each, of aconitine, strychnine arsenate and digitalin, and each morning a moderate dose of a laxative saline; and to these he attributed the preservation of his health and mental vigor up to the time of his death, at the age of 96—and that is long enough for all practical purposes.

There is no study more neglected or more interesting than that of the prolongation of human life; and as one studies it, the simplicity and ease of the practice become apparent. Moderation in all things, persistent physical activity, a clean conscience, avoidance of worry, fresh air, pure water, pure food in quantities exactly proportioned to the need, and a clean alimentary canal; barring accidents, these should easily carry the ordinary individual to his ninetieth year, in full possession of his mental faculties, the capacity to enjoy life and to be useful.

A STRAIGHTFORWARD ANSWER

In the August *Bulletin of the Illinois State Board of Health* Dr. Egan presents a statement in regard to the charges made against him and the Board during the past year, which we commend to the careful attention of every Illinois physician. The statement is straightforward, simple, and brushes away with one sweep the malignant assaults that were made, showing their basis to have been personal and official animosity, without a scintilla of proof involving Dr. Egan and the Board in anything derogatory to their character or their official work.



DR. ALBERT J. OCHSNER

THE first president of the newly organized Clinical Congress of the Surgeons of North America.

Dr. Ochsner is a Wisconsin product. Born at Baraboo in 1858, educated at the University of Wisconsin and Rush Medical College, he is known as one of Chicago's most skillful surgeons. He is Professor of Clinical Surgery in the Medical Department of the University of Illinois.



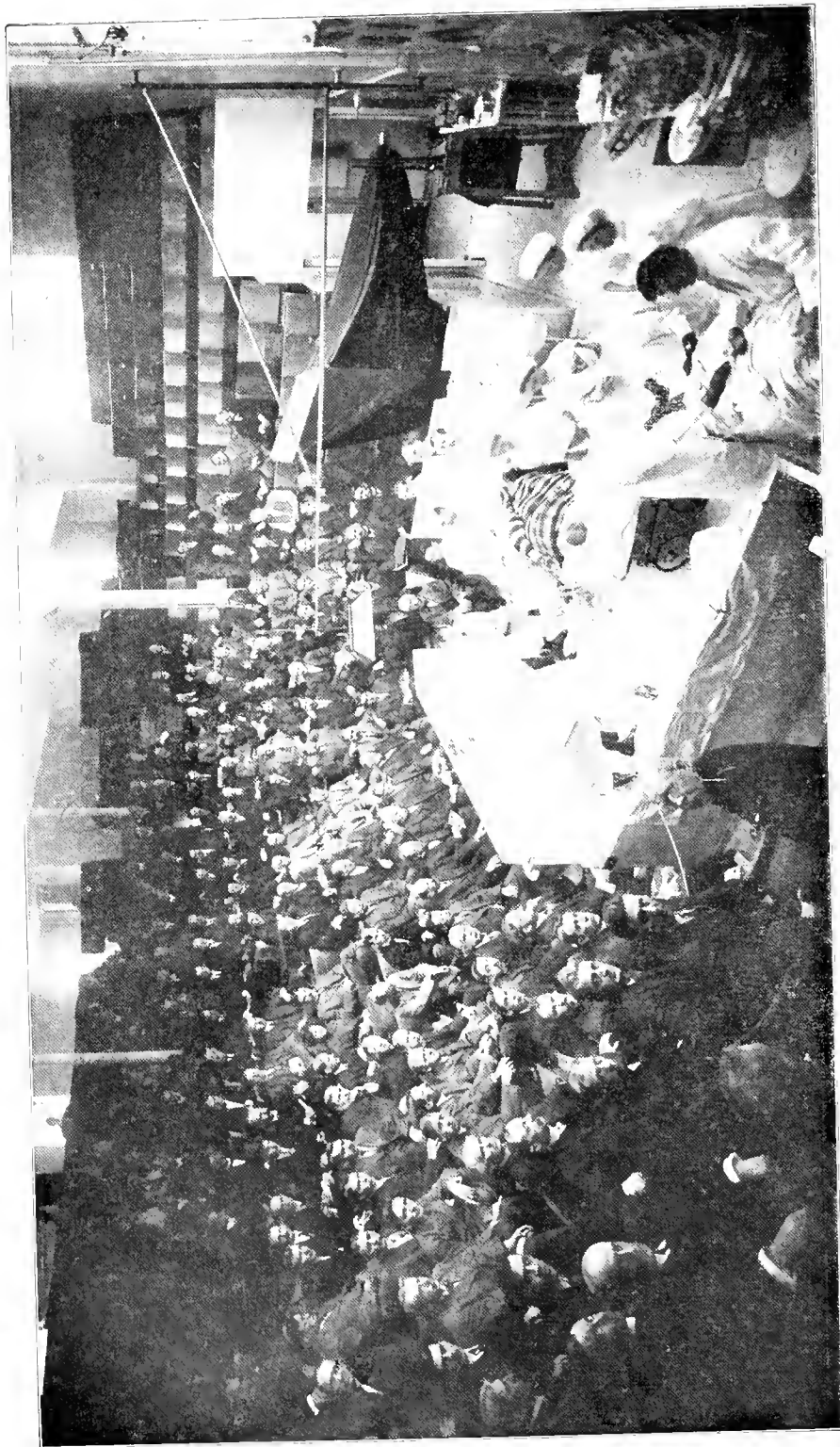
DR. PAUL EHRLICH

NOTHING in recent years has startled the scientific world so much as Prof. Ehrlich's announcement of a "specific" for syphilis—the now celebrated "606." Dr. B. C. Corbus, on another page, tells us about the man and his work, and more about his new remedy. Prof. Ehrlich's side-chain theory of immunity has already placed him among the world's greatest physicians.



DR. I. J. HAWKES AND HIS FAMILY

DR. HAWKES is not one of the world's great physicians, but a simple, unaffected country practitioner who has "made good." He is an old friend of Clinical Medicine—one to whom we are happy to do honor. His wife, one of Virginia's fairest daughters, tells something about the man (see Miscellaneous Department) which will interest every member of our "family."



DR. JOHN B. MURPHY'S CLINIC AT MERCY HOSPITAL

FEW of the clinics provided at the meeting of the Surgeon's Congress, recently held in Chicago, were more generally attended than those of Dr. John B. Murphy, the distinguished president of the American Medical Association. In this picture he is shown prepared to perform his new operation for the correction of ankylosed joints. Dr. Lanphear, in his article on succeeding pages, tells about some of the attractive work shown in Dr. Murphy's clinic.



The Clinical Congress of the Surgeons of North America

The Story of the First Meeting of a New, Novel and Practical Organization

By **EMORY LANPHEAR, M. D., Ph. D., LL. D., St. Louis, Missouri**
Professor of Surgery in the American Medical College, St. Louis

EDITORIAL NOTE.—Thanks to the brilliant conception of Dr. Franklin H. Martin, of Chicago, American surgeons now have an organization, just perfected, at the meetings of which the dry-as-dust (even though scholarly) "paper" is replaced by actual clinical work. The members of this "Congress" learn by seeing things done rather than by hearing men tell about them. Dr. Lanphear tells of the clinical and other work accomplished at its first meeting.

IN November, just passed, in the City of Chicago, there was held a meeting of extraordinary importance: the first series of clinics, demonstrations and addresses before the Clinical Congress of the Surgeons of North America. No mere written words can convey an idea of its brilliant success; several volumes might be devoted to a description of the operations performed.

To Dr. Franklin H. Martin, who conceived the plan, and to his associates on *Surgery, Gynecology and Obstetrics*, must be given great credit—there was not a slip in the entire program from first to last, save the absence of Dr. George W. Crile of Cleveland, who was to have opened the discussion on one of the addresses.

Unquestionably the enormous attendance (fully 1200 surgeons were present, altogether) was a surprise to the originators; yet this great gathering was so skilfully handled that seldom were too many in attendance at any one clinic.

Whatever may have been the objects of the projectors, the meeting clearly demonstrated several notable things, viz.:

1. It showed that the best surgical work of the world is being done in the city of Chicago.

2. It proved that a phenomenal amount of clinical material is at the disposal of the teachers of surgery and gynecology.

3. It made clear the fact that hundreds of the best surgeons of America are ready and willing to leave their business for a whole fortnight to see the newest and best operative work. No doubt next year will see a still greater outpouring.

4. It revealed the extremely harmonious feeling among the surgeons of Chicago—members of the faculties of more than a dozen medical schools worked side by side, day after day, without the slightest visible friction or even slighting remarks.

It was freely predicted, for one thing, that one result of the meeting will be the amalgamation of the three postgraduate medical schools of the city, or at least the establishment of a central bureau where will be posted daily the chief operations to be seen at each. In that event, the suggestion may not be inappropriate that this should include bulletining all operations at all hospitals one day

in advance, as is now done by the New York Academy of Medicine. Such centralization certainly seems to be the logical outgrowth of this meeting.

Wealth of Clinical Material

Perhaps the most conspicuous feature of the entire course was the apparently limitless amount of clinical material. A few of the operations performed one day may be enumerated in this connection.

Dr. F. A. Besley, Cook County Hospital: Fractures of skull, jaw, humerus, forearm, femur, leg, ankle, patella (operative and mechanical treatments); pathological fracture due to cyst of bone.

Dr. Jacob Frank, Columbus Hospital: Laparotomy (operation on ovaries, tubes, shortening round ligaments); stomatoplasty by Pozzi's method; laparotomy for extra-uterine pregnancy; scrotal hernia; modified Alexander operation; circumcision and meatotomy; umbilical hernia; bone-plasty.

Dr. C. H. McKenna, St. Joseph's Hospital: Lateral anastomosis of ileum to sigmoid; abdominal section for closure of fistula; appendectomy; exploration of meningeal tumor; removal of exophthalmic goiter; removal of dead bone from knee; injection of "606" (Ehrlich) for lues.

Drs. Cuthbertson and Ferguson, joint clinic, St. Luke's Hospital: Double salpingectomy; appendectomy; double inguinal hernia; appendicular fistula; excision of goiter; amputation of thigh; drainage of peritonitis; cervical rib.

Drs. Frank H. Martin, Emil Ries, W. M. Cubbins, and others, joint clinic, Postgraduate Hospital: Perineorrhaphy; laparotomy for uterine prolapse; removal of goiter; hysterectomy; injection for spastic paralysis; excision of superior maxilla; double herniotomy; injection of rabbit's blood for hemophilic knee; appendectomy; use of vaccines in infections; x-ray examination of bone-tumors and bone diseases; operation on mastoid; removal of tonsils and adenoids.

Dr. D. A. K. Steele, University Hospital: Appendectomy; herniotomy; removal of tubercular glands of neck; fibroma of parotid gland; removal of prostate; infected tumor

of breast; septic peritonitis; aneurism of descending arch of aorta (treated by introduction of bronze-aluminum wire and with electrolysis).

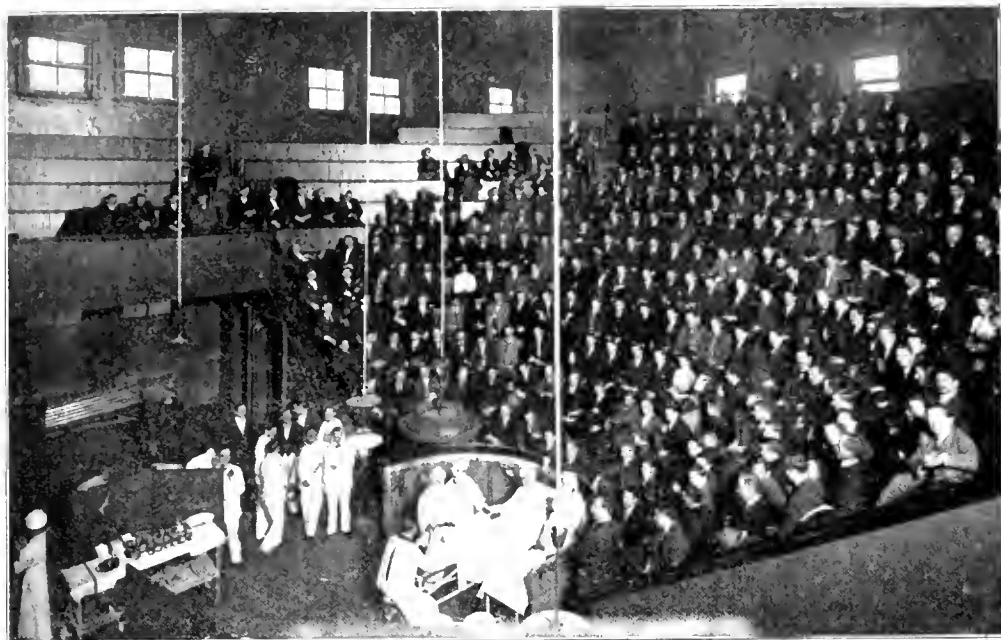
Other equally remarkable clinics might be quoted, but space forbids. Suffice it to say that the "daily bulletins" usually comprised two full pages of closely printed matter. Some of the clinics most abundant in interesting cases (like those of Ochsner and Murphy) were not bulletined by operations but simply scheduled as "surgical clinic from 7:30 a. m. to 1 p. m."

In a report of this kind it is manifestly impossible to mention more than a limited number of the tremendously important performances witnessed, and only a few unusually valuable examples of the marvels of modern surgery may be briefly commented upon.

Martin's Conservation of the Tubes

Among the operations which caused most comment were those of Dr. Franklin H. Martin at the Postgraduate Medical School. Particularly is this true of his operation for suspending the retroverted uterus by a strip of peritoneum taken from the anterior wall of the abdomen and passed through the back of the fundus, as well as when he "unrolled" the fimbriated extremity of the fallopian tubes.

Until quite recently tubes which are "clubbed" by closure of the abdominal ostium from gonococcal infection have been regarded as hopeless and have been removed by hundreds of thousands. Dr. Martin pulls these tubes outside the abdomen, surrounds them with gauze, and then strips the contained pus outward ("milking the tube," he calls it), forcing the fluid out by "hydraulic pressure." It is astonishing how the closely adherent fimbriae open outward, permitting a sound to be passed into the uterus without difficulty. Inasmuch as the pus has become sterile (i. e., the imprisoned gonococci have died), in a large proportion of cases—as often demonstrated by microscopic examination—Martin believes that the tubes thus treated remain patulous. It is true he has had (thus far) no pregnancy following the conservative treatment; but he declares that the menstrual flow becomes seemingly nor-



A clinic at the Cook County Hospital during the meeting of the Surgeons' Congress.
Dr. A. P. Heineck, the operating surgeon

mal, and that the patients are all cured as to symptoms.

A Remarkable Transplantation

Unquestionably the most marvelous piece of work exhibited was that of restoration of the forearm by Dr. John B. Murphy.

A man had the entire flesh of his forearm burned away from about three inches below the elbow to the annular ligament. Five years after the accident there was nothing to be found except cicatrix, periosteum and bone; and the thumb and fingers were absolutely valueless; yet, a reparative operation was designed and carried out in this manner:

First step: By an hour's careful work the entire scar was cut away, leaving nothing but a bunch of contracted, atrophied muscles near the elbow, the denuded periosteum of radius and ulna, and the structures at the wrist. Second step: The tendon of each digit was brought down from the palm and split so as to double the length; then the muscles and fascia at the elbow were split and stretched until they readily reached the tendons so as to permit of suturing without tension, and were then temporarily dropped. Third step: A piece of skin five inches wide by nine inches long was cut from the ab-

domen of the patient, together with all the underlying fat down to the fascia of the external oblique. Through this fat were next passed, directly beneath the skin, five slender dressing-forceps. Then, taking up in each of these forceps the end of one of the newly made flexor tendons, the latter were brought, one by one, through the fatty tissue, which henceforth will act as "tendon-sheaths;" lastly, the tendons were sutured to the separated parts of muscles near the elbow. When all were perfectly adjusted, the skin was sutured at the edges, with extreme care. Fourth step: The wound of the abdomen was closed by sutures and Thiersch graft.

The first dressing was made at the end of two weeks. Perfect healing had occurred, with the exception of one stitch-hole near the elbow. Already the man could flex fingers and thumb to considerably more than a right angle.

It is almost like desecration to state in cold words that the applause at this first dressing was tremendous! Indeed, more than one experienced surgeon present "swallowed hard" to keep back the tears of repressed emotion. Such a manifestation of admiration and pleasure I have never seen

save in the playhouse where the audience was under the magic influence of a Bernhardt or a Paderewski.

Such work, indeed, is *surgery* of the highest order.

Marvelous Bone- and Joint-Work

Everywhere surgeons were working along the lines of bone transplantation and joint reconstruction. Bony ankyloses at crippling or incapacitating angles were not only broken and the bones put in proper position to overcome the deformity, but new joints were made, to give nearly perfect motion.

One young lady was exhibited at one of the clinics who had had bony ankylosis of both hips so that walking was impossible. Both joints were opened (by sawing through the great trochanter and turning it and the attached muscles up out of the way); the bony union was cut away with chisels, and a new synovial membrane made by covering the head of the femur by a flap of the fascia lata with its attached fat; the trochanter was wired back; then the wound was closed without drainage and not opened for three weeks—when the fixation cast was removed. At the time of exhibition of this case the woman walked about the hospital with only the slightest limp; and has been so walking for some months.

In other cases some tissue from outside the body has been used with a fair degree of success. Thus at the Michael Reese Hospital (Jewish) Dr. E. Wyllis Andrews made a new hip-joint by the Baer method, substituting a piece of chromatinized sheep skin for the sterilized pig's bladder advised by Baer. (Possibly the latter is not "*kosher*"!) He said that sheep's skin or gold-beater's skin (calf peritoneum) does as well as bladder for making the "joint-shoe," never yet, so far, having caused trouble when put into a noninfected joint.

The most phenomenal result thus far obtained was also in the service of Murphy. A girl of eight lost all of her right humerus except about two inches above the elbow, but a part of the periosteum was preserved. A piece of bone with its normal covering was taken from the girl's tibia and put in her arm, the lower end being pushed into the medulla, and held in place by a small

nail driven through. The upper end of this improvised humerus was prevented from grinding upon the intact synovial covering of the glenoid cavity by the interposition of a flap of fascia and fat carefully sutured over and around it. In two years a new humerus has grown almost as large as the opposite one, the shoulder-joint has perfect motion, and the child has a strong and useful right arm. Truly, another triumph for modern surgery, another evidence of the ingenuity and skill of Murphy—one of the greatest, if not *the* greatest, of living surgeons!

Exophthalmic Goiters

The region of the Great Lakes must be favorable to the development of hyperthyroidism. During the two weeks' clinics fully half a hundred cases of this condition were shown; frequently two patients were operated upon at the same clinic.

At Frances Willard Hospital, Dr. Cassius C. Rogers one morning had one case too bad for anything except ligation of the thyroid vessels. Another patient was subjected to thyroidectomy—and a most beautiful operation it was. Dr. Rogers remarked that this condition should not be regarded as a surgical one; only surgeons are compelled to operate because the internists have not as yet found the curative remedial agent. He predicted, however, that within a few years it will not be necessary to remove the thyroid in this class of cases.

At several of the hospitals thyroidectomy was performed under combined nitrous-oxide and oxygen anesthesia—which may be prolonged to as much as two hours if necessary. Dr. Alex. Hugh Ferguson (the only man, by the way, seen in Chicago operating without rubber gloves—and he is really so clean, so quick, and so careful that they seem scarcely needed)—prefers ether anesthesia; the patient to be "trained" to it by partial anesthetics induced daily for several days prior to operation, thereby obviating her becoming excessively nervous by dreading the day of operation, since she never knows when the ether is finally to be pushed to full anesthesia.

At one of his clinics Dr. Ferguson kindly permitted me to speak of the advantages, in

certain cases, of operation under an anesthesia induced as follows: One II-M-C tablet injected at 9 o'clock in the evening, to give perfect sleep; another dose injected at 8 in the morning, to insure tranquility; anethaine injected along the line of incision, and deep infiltration with a 1 1-2-percent solution of quinine and urea hydrochloride (carbamidated quinine)—which gives a perfect analgesia of many hours' duration.

Bloodless Prostatectomy

A most wonderful operation was performed by Dr. Daniel Eisendrath, one day, at Michael Reese Hospital, with the assistance of Dr. Gustav Kollischer, namely, a bloodless prostatectomy.

Kollischer bound bandages around the thighs close to the hip and around each arm at the shoulder, tightly enough to produce decided cyanosis of all extremities. Eisendrath then made a long cut above the pubes, pushed the peritoneum off the bladder and opened the latter with a cut fully three inches long—and no blood flowed. The prostate was then seized with vulsellum forceps and pulled upward, the mucous membrane was cut behind the internal meatus and the prostate shelled out, and this without the loss of an ounce of blood and with but little destruction of urethral tissue. The cavity was then packed tightly with iodoform gauze, the bladder-wall was sewed by two rows of chromic gut except at the point of drainage, and lastly the external wound closed carefully. Then the man was lowered from the extreme Trendelenberg posture and Kollischer's bandages were removed—just plain three-inch muslin, by the way. Only trifling secondary oozing occurred. Certainly, the technic marks a great advance in surgery of the bladder.

New Operators

Chicago has a large number of men doing extremely good surgical work, men probably unheard of by most readers of *CLINICAL MEDICINE* and other nonsurgical journals, yet doing work that would have been a credit to such luminaries as Senn, Parkes and Fenger of the past generation. Thus one day, at Hahnemann Hospital, Dr. Chas. E. Kahlke operated on cases of ventral hernia, tumor of bladder, osteomyelitis of tibia,

acute osteomyelitis of humerus, inguinal hernia, external urethrotomy, exploration of fracture of skull—all extremely well handled. Many regard Kahlke as "a second Murphy," soon-to-be.

Among other men who were greatly admired by those in attendance may be mentioned F. A. Beasley, C. G. Buford, C. W. Barrett, Norman Kerr, A. B. Keyes, C. O. Young, T. J. Watkins, Dean Lewis, N. M. Percy, H. M. Richter, M. J. Seifert, T. A. Davis, John Dill Robertson, A. P. Heineck, W. Hessert, W. E. Morgan, W. R. Cubbins, Emil Beck, L. W. Bremerman, W. S. Barnes, P. S. Doane, A. H. Brombach, George F. Thompson. Many more might fairly be remembered in this enumeration.

Dr. Lespinasse's Demonstration

Among the most sensational of the demonstrations must be mentioned the anastomosis of blood-vessels by means of magnesium rings. To see the abdominal aorta of a dog cut squarely across, and then repaired so that the animal lives (as was done time and again) is something startling. Fully as much interest was displayed in this work from day to day as in the most intricate operations upon human beings. All agreed that this procedure marks a decided step in reparative and curative surgery; and all united in praising Dr. V. D. Lespinasse for the care he took that all should see every detail of the technic.

Injection of Ehrlich's "606"

Much interest was manifested in the injection of Ehrlich's "606" (dioxydiamidoarsenobenzol dihydrochloride) for syphilis, in a number of the hospitals, this interest centering more especially in the presentation of patients who had already been treated by the method. Several early cases seemed to be cured; several late cases appeared to be benefited. All were agreed that if this agent is what is claimed, it is the greatest discovery since Jenner's introduction of vaccination—possibly with the exception of the development of the diphtheria antitoxin.

The Addresses

Some of the addresses were of great value. All were attended by immense audiences, hundreds of visitors being turned away from

some. Hereafter a larger hall must be provided for this purpose (at the expense of the visitors, of course).

The chief addresses delivered were as follows:

"Ligation of Vessels, or Partial Extirpation in Exophthalmic Goiter," by Dr. Charles H. Mayo of Rochester, Minn.

"The Lane Kink," by Dr. Franklin H. Martin of Chicago.

"Poliomyelitis in the Light of the Recent Epidemics," by Dr. H. E. Robertson of Minneapolis.

"Surgery of Bone," by Dr. John B. Murphy of Chicago.

"Pneumatic Bursting of Intestine," by Dr. E. Wyllis Andrews of Chicago.

"Congenital Dislocation of Hip," by Dr. John Ridlon of Chicago.

"Treatment of Painful Feet," by Dr. John L. Porter of Chicago.

"Alcohol Injections in Spastic Paralysis," by Dr. Nathaniel Allison of St. Louis.

"Tendon Transplantation in Infantile Paralysis," by Dr. E. W. Ryerson of Chicago.

"Hemolytic Jaundice," by Dr. W. S. Thayer of Baltimore.

"Reconstructive Surgery of the Face," by Dr. John B. Roberts of Philadelphia.

"Funnel-shaped Pelves and their Treatment," by Dr. J. Whitridge Williams of Baltimore.

"Cesarean Section," by Dr. Herbert Marion Stowe of Chicago.

Besides the foregoing, other papers were read by Chicago surgeons of more or less repute.

It was widely suggested, and strongly, that, inasmuch as the Chicago men were so largely in evidence in the clinics by day, it would be no more than a "square deal" to have all of the evening addresses (and most of the discussion thereon) by prominent men from outside the city.

Prominent Men Present

Among those in attendance the following are more or less widely known: Dr. Wm. Jepson of Sioux City, Professor of Surgery in the State University of Iowa; Dr. H. H. Chown of Winnipeg, Professor of Surgery in the University of Manitoba; Dr. Sam W. Kelley of Cleveland, Ohio, formerly Pro-

fessor of Surgical Diseases of Children in the College of Physicians and Surgeons; Dr. C. N. Nicholson of St. Louis, Professor of Surgery in St. Louis University; Dr. Lewis Schooler of Des Moines, formerly Professor of Surgery in the Iowa College of Physicians and Surgeons; Dr. John P. Lord of Omaha, Professor of Surgery in Creighton University; Dr. D. S. Fairchild of Clinton, Iowa, late Professor of Surgery in Drake University; Dr. James Ball of Montreal, Professor of Surgery in McGill University; Dr. J. W. McMeekin of Saginaw, Mich., formerly Professor of Surgery in the Saginaw Valley Medical College; Dr. Clarence W. McElhane of Greenville, Pa., Instructor in Experimental Surgery in the American Medical College of St. Louis; Dr. Joseph L. Boehm of St. Louis, late Professor of Genitourinary Surgery in the College of Physicians and Surgeons; Dr. L. J. Hirschman of Detroit, Professor of Genitourinary Surgery in the Detroit College of Medicine; Dr. Morris Rosenthal, Surgeon to St. Joseph's Hospital, Ft. Wayne, Ind. Numerous other surgeons of equal prominence from all over the United States and Canada were in evidence, whom, however, I did not identify.

Permanent Organization

So great was the satisfaction over this, the first meeting of the kind, that the visitors met and effected a permanent organization. It was decided to hold a similar meeting yearly hereafter. The time and place of the 1911 Congress are not yet decided, but it probably will be held in one of the large eastern cities.

The following officers for 1911 were elected: President, Dr. A. J. Ochsner, Chicago; vice-president, Dr. John B. Clarke, Philadelphia; secretary, Dr. Franklin H. Martin, Chicago; treasurer, Dr. L. B. Kanavel, Chicago; manager, A. D. Ballou.

Delegates to future congresses are to be elected as follows: one from each congressional district, two at large from each state, two from each province in Canada, two from Mexico and each Central American republic, and two from each colony of the United States, i. e., Porto Rico, the Philippines and Hawaii. There are no sectarian tests for membership.

Sexual and Venereal Diseases

Their Medicinal Versus Nonmedicinal and Surgical Treatment

By WILLIAM J. ROBINSON, M. D., New York

Editor of "The American Journal of Urology," "The Critic and Guide," and
"The Medical Review of Reviews"

EDITORIAL NOTE.—Distinctly the pendulum is swinging backward from the extreme pessimism concerning the usefulness of drugs which has characterized a considerable proportion of the profession during the last decade. This is shown inubitably, incontestibly, in Dr. Robinson's brilliant paper, which certainly belongs to our "Progress Number."

TO attend the meetings of some of our advanced or special medical societies and to listen to the papers and discussions, one would think that drugs are no longer used in medicine, that materia medica and pharmacology are discarded sciences and that the Pharmacopeia and Dispensatory have been, or if not, should be, burned and their ashes scattered to the four winds. For, in the discussion of treatment you very seldom hear, and that only incidentally, the name of a drug referred to. Surgical treatment holds the center of the stage. After that comes electricity with the high-frequency current, fulguration, etc., then the Roentgen rays, and radium (which though a material substance is not classed among drugs, for it owes its virtues to immaterial emanations), then various mechanical appliances, and if more material things are referred to, they are generally the sera, vaccines and bacterins.

Now it should be utterly and entirely unnecessary for me to state that I am not in the very least opposed to any of the above agents in the treatment of disease. Opposition to them would be absurd and stupid. I use every one of the nonmedicinal methods and agencies in my specialty—the treatment of sexual and venereal diseases. I simply object to their monopolizing the stage to the exclusion of drugs, which I consider indispensable adjuvants in the treatment of almost any disease. If I saw drugs being used in the treatment of disease to the exclusion of other methods I should be just as displeased and I should then speak and write in favor of nonmedicinal therapeutics.

The true reformer not only starts the pendulum swinging in the right direction, but,

when he sees that it has swung too far, he swings it in the other direction, so that a proper balance may finally be established.

In this paper I shall refer principally to the medicinal versus nonmedicinal treatment in sexual and venereal diseases.

More Knowledge of Drugs—Fewer Surgical Operations

More than once I have had occasion to tell my fellow urologists, that if they were a little more familiar with the action of drugs, if they did not consider it beneath their dignity to devote some time to the investigation of the action not only of new, but of some old remedies, their patients would often escape surgical operations and mechanical manipulations, and would be so much better off.

I recently attended a meeting of one of our most prominent medical societies. Among the papers read was one on the treatment of gonorrheal arthritis by gonococcus vaccines. The author reported three cases. Of these two were stated to be cured, and one "practically" cured. Now, it so happened that of the two reported as cured, one afterwards applied to me for treatment; for he remained well for about three weeks, then his wrist began to pain and swell again, and as he did not want a repetition of the painful injections he did not go back to his former doctor. And when he applied to me for treatment the first thing he asked was whether I would use gonococcus injections on him. I did not use any gonococci on him but treated him with calcium sulphide and arsenic iodide and external applications, and his wrist got perfectly well and has remained well for more than seven months; and the getting well of the wrist was to that

young man a matter of life and death, as he was making a living by playing the piano.

The other two cases were women. As one of these was only "practically well"—and "practically" well some cases of gonorrheal arthritis sometimes get under any treatment—we will leave it out of consideration. The other case reported as cured received billions and billions of gonococci over a period of more than five months. The "practically cured" case received fifteen injections of fifty to five hundred millions each. By the way, how some doctors do enjoy rolling these big figures between their teeth: 50,000,000, 100,000,000, 500,000,000—it sounds so big, and looks so impressive on paper.

Useful Drugs of Which the Specialists Knew Nothing

Though I believe that the sera and bacterins may be employed in some rebellious cases and though I hated to adopt an antagonistic attitude, I could not help getting up and saying that I should feel ashamed if I could show no better results in gonorrheal arthritis, obstinate as that affection is, and that I would hesitate to come before a medical society with such a report. And then I spoke of the results which we obtain by *saturating* the patient with calcium sulphide and arsenic iodide, and by the external use of guaiacol, methyl salicylate, unguentum Credé, etc. And, of course, as I expected, there was hardly anybody in the audience who had ever heard of the use of calcium sulphide and arsenic iodide in gonorrheal arthritis.

Yes, at the end of the meeting I discovered two doctors who had heard of them.

We are justly proud of our new diagnostic urologic instruments. By the aid of the endoscope, cystoscope, cysto-urethroscope, urine-segregator, ureteral catheters, etc., we can now diagnose conditions with certainty, which we could only guess at before. But has our treatment made such very wonderful progress? A few men are doing good work, but, for instance, has even the treatment of gonorrhea, as practised by the vast majority of the profession (and here I mean not only the general practitioner but the specialist as well), undergone such won-

derful changes? I fear we must answer this question in the negative.

Diagnostic Instruments that Do Harm

And what's more, I fear, nay, I *know*, that our wonderful diagnostic instrumentarium is responsible for many, for very many mishaps and complications. Of the last seven cases of epididymitis that I have treated, *three* were induced by examination and treatment. Two followed the mere examination by the urethroscope, and one followed a forcible injection of argyrol. And I am sure that many extensions of gonorrheal inflammation from the anterior to the posterior urethra are caused by our various diagnostic instruments, which our young specialists are so fond of displaying.

And I think it is unfair, very unfair, to push instruments into a urethra, when there is no real indication for them and when it is done, as it often is, merely for the purpose of *impressing* the patient. There is no need of "impressing" a gonorrheal patient. In treating hysteria, neurasthenia and various other nervous and psychic conditions we may need the aid of suggestion, but the gonococcus is absolutely unamenable to suggestion, and only laughs at beautifully furnished offices, enameled surgical chairs, large irrigators and the latest models of urethroscopes.

Two Reasons for My Success

If I have obtained some reputation for success in the treatment of venereal and sexual diseases, it is due to two causes: First, *I have respect for the male urethra*, having learned that it was not made to be poked with instruments except for very good reasons; and, second, *I have respect for drugs*.

Perhaps the latter is due to the fact that before devoting myself to urology, I was an ardent student of pharmacology, but the fact is that the waves of therapeutic nihilism have passed over me without any effect, and I am as strong a believer in the virtue of properly prepared and properly administered drugs as I ever was. And I believe that by the proper combination of drugs we can produce such a demulcent and antiseptic and even solvent effect on the urine, and on the renal and vesical mucosa as to render

operative interference in numerous cases unnecessary.

Unpleasant as it is to say it, the truth must be stated that a good part of one physician's practice—at least the writer's practice—is due to the meddlesomeness of the other physician. The meddling is done in good faith; the doctor means to do his best, he wants to hurry matters, and make the patient well as quickly as possible—but the results are often disastrous. And by merely stopping all injections, all sounds and dilators, all examination and instrumentation, and by ordering simple demulcents, like flaxseed tea and infusion of triticum, by administering mild antiseptics like arbutin, sodium benzoate, small doses of hexamethylenamine tetramine (urotropin), or the balsamics, the best of which still remains oil of santal and its various chemical combinations (santyl, lacto-santal, thyresol), by giving an occasional sedative rectal suppository or advising a sitz bath, we often obtain results which are highly gratifying to the patient, and which increase your reputation enormously, when as a matter of fact most of your treatment has been more of a negative than of a positive character. To correct the effects of somebody's overzealousness is not such a difficult matter.

The Difficulty and Danger of Ureteral Catheterization

There is one urologic procedure which I would condemn most emphatically when not employed for very good reasons by skilful and practised hands. I refer to ureteral catheterization. It is not three hours since I discharged, as cured, a patient who came to me five weeks ago in a very deplorable condition. According to his statement, he had had some pus in the urine for several days, and the day before he had applied to a specialist who had catheterized his ureters for diagnostic purposes. The result was severe cramps, hemorrhage and later on a chill. When he came to me the hematuria was very distinct. Rest in bed for a few days, with arbutin, and later on small doses of urotropin, brought about an amelioration of the symptoms, and now his urine does not contain a particle of pus. It is not necessary to attempt to be ultra-fine in

diagnosis, unless our ordinary methods of treatment prove unavailing.

I wish to report something which I do not remember whether or not I have reported before, but which is very significant, and which coming from the source it does, deserves thoughtful pondering. Prof. Max Nitze, the inventor of the cystoscope, has done more for cystoscopy and ureteral catheterization than any other urologist, living or dead. He was not only a great physician, he was also a good man. Though Nothnagel says that only a good man can be a good physician, still there are some great physicians who are not such very good men. But, as said, Nitze was both. He was very conscientious in the treatment of his patients and he felt keenly the damage done to other patients by his instruments in the hands of overzealous practitioners. And this is what I heard him say in the presence of several physicians, at his office one evening, March 18, 1905: "When I see what is being done to some patients, I am forced to the conclusion that it would have been better for humanity if ureteral catheterization had never been invented."

While the instrumentarium for ureteral catheterization has undergone some improvement during the last five years, and while I believe that those who practise it have in general attained a higher degree of efficiency and manipulative skill than was the case five years ago, still I pity the patient whose ureters are invaded without very definite reasons, very positive indications, and I repeat that Nitze's words are worth pondering over deeply. The ureters were not intended for foreign invasion. And I will say, risking repetition—it is only by frequent reiteration that we can impress a truth—that, *ceteris paribus*, those who use the fewest instruments and the mildest measures, and are on good terms with the materia medica, will obtain the best results in treating diseases due to the gonococcus.

Many Remedies Are and Will Be Useful in Syphilis

While in syphilis two drugs stand out prominently and are practically indispensable, still I assert that the physician who is thoroughly familiar with the action of other

drugs besides mercury and potassium iodide and uses a number of them according to indications, either as adjuvants or as substitutes in the intervals, will attain far better results than those physicians or even specialists who believe that mercury and iodine are the alpha and omega of antiluetic treatment.

And I venture to maintain that even in spite of the wonderful properties of paradi-oxydiamidoarsenobenzol, other drugs will not become entirely superfluous in the treatment of the syphilitic scourge. General eliminatives, diuretics and diaphoretics—don't forget small doses of pilocarpine—and tonics and sanguifacients (chalybeates) will still be required and an occasional use will still be found even for the old, hoary Zittmann's decoction.

If this is heresy or old-fogysm, make the most of it.

And by the way, having mentioned paradi-oxydiamidoarsenobenzol, or "606," or as it is now going to be called, "salvarsan," I cannot refrain from mentioning a little point in connection therewith, which would be funny if it were not sad at the same time. On several occasions, on hearing physicians speak of "606," I noticed that they were under the impression that it was some kind of a serum. They knew that it contained arsenic, but still they had a vague idea that it was a serum, an arsenical serum. Perhaps this was due to the fact that they always knew that Ehrlich was working on the blood and on sera, and at one meeting I heard one physician state that the splendid discovery of Ehrlich would and should stimulate us in the further study of sera and vaccines. Let me then say it to those who are in need of the information, that "606" is as much a chemical as any substance can be a chemical; it is merely an organic combination of arsenic. And if "606" is to encourage us in anything, *it is in the further study of the tremendous powers residing in drugs and chemicals!*

In the treatment of sexual disorders our main reliance, outside of drugs, has been on electricity. But I regret to say that not taking into consideration the element of suggestion—and suggestion will not carry the patient very far except in cases of undoubted psychic impotence—the results of electricity have never been very brilliant, and certainly not superior to those obtained from proper medicinal treatment. If it comes to comparisons, I would say that hydrotherapy in its various forms is decidedly superior to electricity. But whichever of the nonmedicinal agencies be given the palm of precedence, drugs always form a very useful, and at times an indispensable, adjunct and they can be discarded only at the expense of the patient.

In short, in the treatment of human ailments and diseases, drugs play, and probably always will play, an important role. In some diseases they are of paramount importance and occupy the very first place; to attempt to treat the patient without them would be criminal. In other diseases, while not indispensable, they are useful adjuncts: to attempt to do without them would be foolish.

Surgery, diet, exercise, hydrotherapy, mineral waters, direct sunlight, heat, massage, electricity, the x-rays, the Finsen light, radium, the sera and bacterins, psychotherapy, hypnotism—all these are important agencies in the treatment of disease; in many cases they are indispensable; in many cases any one of those agencies will alone accomplish the cure. But *materia medica*—*materia medica* in the old-time sense, comprising drugs of vegetable, mineral and animal origin—is second to *none* of them. And taking into consideration the vast number of diseases in which drugs are useful, their universality, simplicity and ease of application, they are superior to any of them, with the exception perhaps of surgery.

We are not yet ready to throw our *materia medica* overboard.



The Surgeon's Work at the Military Encampment

What a Surgeon in the Idaho National Guard Saw, and Some of the Things He Learned, at the Maneuver Encampment, Held at Cosgrove, Washington

By **CHARLES STUART MOODY, M. D., Sandpoint, Idaho**
Major and Surgeon, Idaho National Guard

THE lay physician is so little acquainted with the wonderful system of sanitation developed and being carried on by the surgeons of the regular army that no apology is deemed necessary for burdening the readers with a brief narrative of the sanitary and hygienic régime of the recent maneuver encampment held at Cosgrove, Washington.

This article becomes the more necessary in that there were many things developed there that should prove of more than passing interest to the active medical man, and more particularly to one who has charge of the sanitary department of his city or town.

Camp Sanitation of Recent Development

Camp sanitation *per se* is a child of comparatively recent birth. Prior to our recent war with Spain but little heed was given to the arrangement of a military camp, or to its sanitation after it was established.

The needless loss of life in the concentration camps during 1898, awakened the military authorities to a realization of the deplorable prevailing conditions. They sat at work with commendable promptitude to bring about a change, and the change so wrought has been little short of marvelous.

The old-time military surgeon did not appreciate, seemingly, that a man dead from typhoid, dysentery, yellow-fever or malaria was just as effectually dead, so far as his value as a soldier was concerned, as though he had "met up" with an ounce of lead. Apparently, they supinely waited until the trooper contracted disease and then tried to cure him, instead of endeavoring to prevent his contracting it.

All this is now changed. The constant aim of the military surgeon is to prevent

disease. He looks upon every case of typhoid fever as a reflection upon his sanitation and soundly berates himself for some negligence, even though he is not berated by his superior in rank.

In consequence of the rigid rules followed, all looking toward a clean camp, and the constant reminding of company commanders of their duty toward the men under them with regard to looking after their personal hygiene, the communicable diseases were noted for their scarcity in the Cosgrove encampment. Out of all the several thousand troops, both regular and volunteer, that occupied the camp grounds last summer, there were not to exceed half a dozen cases of typhoid fever, and these were confined almost solely to the state troops who had brought the infection with them. So rigid was the care taken of those in the fever wards of the brigade hospitals that no case of typhoid fever arose from those treated for that disease. The same was true of other diseases.

In the West we have no malaria, of course, consequently the only other important disease was dysentery. I do not recall one single case of dysentery while we were there. I was informed that a few isolated cases arose among the regular troops who had recently returned from the tropics, but these yielded very quickly to remedial measures, and none of the other troops were infected.

How Disease is Prevented from Spreading

At the risk of becoming tiresome, I must crave permission to detail at some length the means employed to prevent the spread of disease in the military camp.

The military reservation at Cosgrove is, perhaps, the most ideal, from every point of



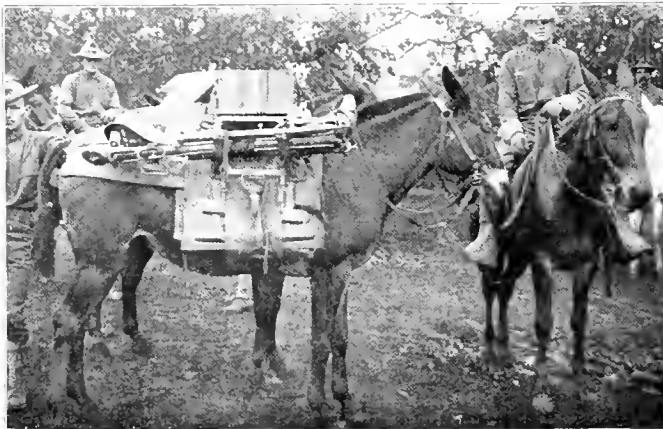
A section of our camp, showing the sanitary condition of cooking arrangements

view, of any in the Union. It is situated sixteen miles from the city of Tacoma, Washington, on the Northern Pacific, and is further connected with that city by an inter-urban traction line. The distance is sufficiently far from the city to prevent the soldiers loitering about town when they should be in camp.

The soil is volcanic ash mixed with sea gravel and rests upon a stratum of volcanic basalt. The porous quality of this soil furnishes an admirable drainage. So quickly does the water disappear after a rain that within a few hours after a hard downpour the ground will be dry. The elevation is something like 300 feet above the sea-level. The climate is equable, the days not too warm, the nights rather cool. There are no intensely hot days, the sea-breeze tempering

the heat. The surface is somewhat rolling, and it is covered with a sparse growth of stunted oak, except along the bluffs jutting the bay and the margins of several small lakes, where a growth of Douglas fir and red fir stand. The uplands are devoid of undergrowth.

The camp itself is laid out under the most modern ideas. Water is supplied by a system of underground pipes, conveyed from an immense standpipe. The supply is pumped from a deep well into the standpipe. Exhaustive tests were made of the water daily with negative results so far as pathogenic bacteria were concerned. While the water was purer than that in constant use in three-fourths of our cities, the sanitary authorities were not content to take even the slight risk that might arise from using the same as it came from the well, but supplied each organization with a still capable of sterilizing some 300 gallons a day. A man from the hospital corps was detailed to operate this still and familiarize the volunteer troops with its use. This water, so purified, was used by the men for drinking purposes. They were forbidden to fill their canteens either from the faucets or from running streams which they might



"Maud," loaded with a machine gun and ready for work



The military camp, showing the state of cleanliness

cross on the march. It does not require a very astute student of hygiene to figure out that the chances of contracting disease from drinking water were quite remote.

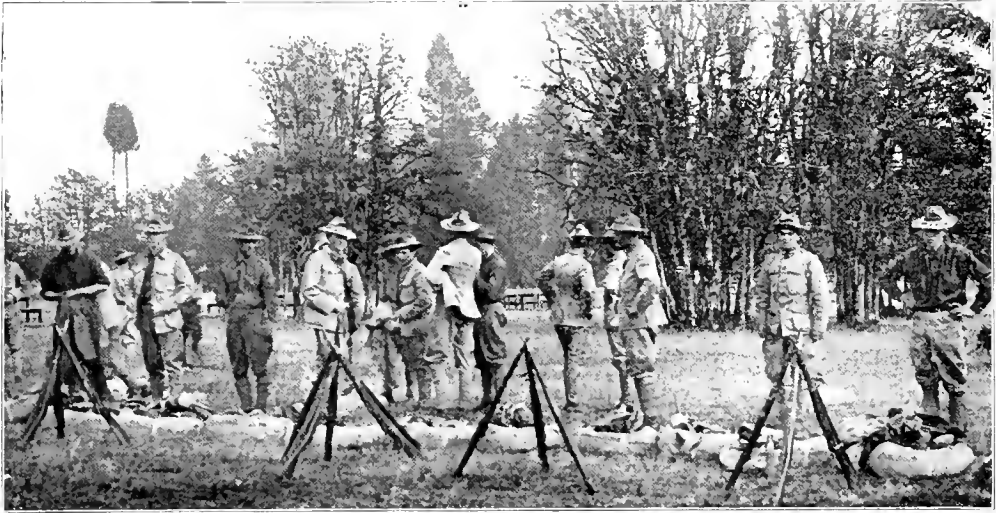
The Disposal of Refuse and Excrement

The refuse from the cooking was placed in two galvanized iron-covered cans, one for the liquids, the other for the solids. Each morning the can containing the liquid slops was conveyed to a cesspool some distance from the camp ground, the same being covered by a fly-tight cap having a hinged lid, and there dumped. The absorbent quality of the soil soon carried it away. The solid contents were hauled away every morning by the garbage-wagon and deposited in an incinerator something like half a mile from camp. This incinerator was a long trench, the bottom covered with loose stones. Not only were the cans dumped here, but all the refuse from the camp itself, the manure and straw from the stables, in fact everything that accumulated all out the camp. After being deposited, the mass was saturated with crude petroleum and fired. The fire was kept burning all the time. Once each week the incinerator pit was filled and another made.

Recognizing that human excreta are the most potent source of infection, especial care was taken to prevent the dissemination of disease from this source by means of flies. The latrines were pits four feet wide, five feet deep, and ten feet long, covered with fly-tight seats having automatically falling lids. A galvanized iron trench terminating in an iron pipe leading into the vault was supplied as a urinal. Several loads of dry earth and several more of shavings were placed in each one of the latrines. Every morning a squad visited each latrine, turned back the coverings, shoveled in several inches of dry shavings, saturated the mass with two gallons of crude oil and set it on fire. After the fire had burned out at least two inches of dry earth were spread over the bottom of the pit.



The sergeant applies an emergency dressing



Idaho troops getting ready to pitch shelter tents while on a "hike"

A quart of crude oil was poured into the urinal and the seat replaced, banking it up with earth.

Personal Care of the Men

The personal care of the men was strenuously looked after. Each day the conical tents were rolled up around the bottom, the bedding and clothing spread out and aired. The men were induced to perform their ablutions at a stand placed somewhere centrally in the company street, where a slight pit had been made, and this was filled with loose stones. This washstand, too, was treated daily to a bath of crude oil. The troops were discouraged from throwing waste water about, and if one had been detected performing any of the calls of nature in a place other than that provided, that unfortunate "rooky" would have landed in the guard-house.

As an example of the care taken to prevent the spread of disease, it is only necessary to cite one case. Just prior to our arrival the Second Oregon regiment vacated the ground upon which we pitched our tents. A case of typhoid fever developed in Oregon's troops and the patient was placed in his regimental field hospital. As soon as the regiment broke camp, a detail was sent from the Regimental Headquarters Hospital of the Regular Army, and that detail removed all the earth down to a depth of four inches

where the Oregon hospital stood and treated the earth to a thorough sterilization with chloride of lime.

The actual treatment of the men who reported at sick-call every morning was but little different from the usual routine of office treatment, with the exception that the men were given instructions with regard to the care of their feet, their food, bathing, etc. All efforts, as before suggested, were bent toward keeping the men well, instead of curing them after they became unwell.

The experience, aside from its medical and surgical bearing, was a very interesting one. Even to the casual observer it became evident how expeditiously the government could, in case of need, bring into the field an effective fighting force. The vim and zest with which the citizen soldiery took hold of the problems of warfare and camp life bespoke volumes for their intelligence and patriotism. The regular army officers having charge of the instruction were, to a man, imbued with a sincere desire to teach both the officers and enlisted men of the National-Guard forces the art of war. They seemed to recognize the fact that the time had passed for sneering at the "militia."

I cannot close this article without paying a tribute to Major Surgeon W. F. Truby of the regular army who had charge of the sanitary inspection of the National-Guard Camps. Major Truby proved himself to



A bivouac Shelter tents pitched and men ready for sanitary inspection

be a professional gentleman of the old school, ready at all times to instruct, out of the abundance of his learning, the guard medical officers, and it was a poor officer indeed who did not profit by his teaching.

All the medical officers, from Chief Surgeon Lt. Col. Elbert down to the newest Lieutenant, proved themselves to be filled with a spirit of professional courtesy and good fellowship.

Tobacco and Diabetes

The Record of a Personal Experience

By **REAR-ADMIRAL A. A. HOEHLING, M. D., Washington, D. C.**
Medical Director, United States Navy

I HAVE made a few observations on myself, who have chronic diabetes.

About the end of last May I had reached 4.50 percent of sugar in my urine. I was advised to try opium, but this nauseated me; then I took narceine, which had little or no effect on my micturition. Then I took up again my former habit of smoking, whereupon urine was voided less and less frequently. My urine now contained but 1.4 percent of sugar. I continued smoking cigarettes, and at present the analysis reads, "Sugar, slight trace."

I have suffered from glycosuria in a mild form, for ten or twelve years, the result, probably, of a gouty habit.

I took up smoking again because tobacco is a narcotic and also because I like it. The opium had been recommended, by a com-

petent physician, as a reducer of glycogenesis. Dr. Wm. F. Waugh of Chicago, formerly of the U. S. Navy, was my adviser. I took from 1-8 grain of narceine three times daily up to 3 grains, in gradually increasing doses, but did not try it long enough to speak positively of its effects; it made me slightly drowsy in the larger doses.

Once, when I lived on milk and eggs exclusively, I did not pass any sugar at all. I suppose the sugar of milk was used up in my system. I do not diet rigidly, and use cereals, wheat bread, fruit, and much milk; never sugar in its pure form, as such. My diabetic friends who dieted rigidly, two in number, are dead. I do not believe that when one causes sugar to disappear in this disease the condition is removed absolutely; and the entire absence of sugar in the nutri-

tive process is fatal from a sort of inanition. Of course, in case of death from the acetone poisons sugar must be present in the system.

I am well nourished and have good digestion, but my legs are feeble, and I am in the early stages of tabes, of about four years' standing.

Personal Impressions of Dr. Paul Ehrlich and His Work

By B. C. CORBUS, M. D., Chicago, Illinois

Adjunct Professor of Genitourinary Diseases, College of Physicians and Surgeons,
Medical Department of the University of Illinois

EDITORIAL NOTE.—As soon as the announcement of Ehrlich's discovery of a specific for syphilis was made in America, Dr. Corbus started for Frankfort. Two hours after his arrival in that city he was, as he tells us, sitting comfortably in Prof. Ehrlich's office, smoking one of his excellent Havana perfectos and listening, at first hand, to the story of "606." His description of the man Ehrlich and of his last and greatest achievement in the world of medicine therefore has a peculiarly personal and timely interest.

TO the average American, a casual meeting with Dr. Ehrlich upon the streets of Frankfort would excite no unusual curiosity, unless one were familiar with his work and especially interested in the new specific, dioxy-diamido-arsenoben-zol, or "606" as it is familiarly called.

The Personality of Professor Ehrlich

Dr. Ehrlich is slightly past middle age. His height, I should say, is about five feet six inches, and, unlike many of his kind, he is rather sparsely built, perhaps because he does not partake of so many meals a day as is the custom on the continent. This may be due to his long hours of work, as many times while working on a problem a sandwich is all the nourishment that he takes.

To any one who is fortunate enough to gain entrance to his *sanctum sanctorum*, Dr. Ehrlich is most courteous. At the time of my recent visit to Frankfort, he was overrun with visitors, and had been for many weeks previously. Naturally it was not surprising to find him a little nervous and easily excited. If one could picture any man in such a position without finding him in the same condition, I think he would be a marvel.

He is an inveterate smoker and has a large box of "Havanna Importierte" on his desk ready to offer the visitor on his first

appearance. It has been said that his salary from the government is so small that it is not sufficient to buy his cigars. (The truth of the matter is, that he receives about fifteen hundred dollars a year from the state and does smoke excellent cigars.) Dr. Ehrlich's wife, however, has a large private fortune and from this he is able to live in a manner befitting his station. The man is totally devoid of any style or show, in fact, it has been said that unless his wife looked after his clothing it would be indeed very shabby.

His Earnestness and His Thoroughness

In conversation one is immediately impressed with his earnestness and there is no attempt to "show off" his superior knowledge of the subject under discussion. He describes everything in detail, and one must be content to listen until he has finished, and I must say that some of his sentences are extremely long.

During my visit in Frankfort, it was necessary to make an appointment each time I desired to talk to him. All this was done by the porter and by Dr. Louis H. Marks, first assistant to Dr. Ehrlich, who by the way is an American from Louisiana. I understand Dr. Ehrlich speaks English, but in his study English is "verboten."

The surroundings are similar to those in our laboratories. The building is of red

brick, three stories high and open on all sides. The laboratory furnishings are simple and, as I have remarked elsewhere, reminded me of a carriage that had the paint all knocked off but was still in good running order. Just back of the laboratory are the houses for the animals that are used for experimental purposes.

It was through Dr. Marks that I learned most of Ehrlich's early work. While I was there the representative of McClure's magazine was also in Frankfort, making arrangements for the article that appeared in the December issue of that periodical.

As in the case of many other great men, Ehrlich's early school days, we might say, were not characterized by brilliancy in scholarship. He was graduated from the University because he had done some special work with the leukocytes, and not because he was especially competent in all his studies.

The Fundamental Idea in All Ehrlich's Work

Ehrlich's fundamental idea, which he has followed logically from the very beginning of his experimental work, down through his present world-stirring discovery is, if I quote Dr. Marks correctly, that a specific living chemical affinity exists between special living cells and specific chemical substances. This is his main, most valuable acquirement and most suggestive contribution to science.

In immuno-therapy we have the most ideal form of "specific therapy" (example, diphtheria antitoxin). Here the antibodies are formed as products of complicated reactions on the part of the animal organism and are always specific, that is, "they act exclusively on the respective bacteria or their products."

Unfortunately, in syphilis the successful formation of antibodies in the above manner has not been found possible. The same is true of malaria, trypanosomiasis and a few other diseases produced by protozoa.

In these diseases we must attempt to kill the parasites chemically. Unfortunately, the many chemicals that act as destructive agents against the parasites act equally destructively upon the human organism, and so we are "between the devil and the deep sea."

Ehrlich has coined two words, *parasitotropic* and *organotropic*, which he applies to chemical substances, as follows:

1. Substances that are capable of killing parasites he calls *parasitotropic*.
2. Substances that are capable of killing the animal cells he calls *organotropic*.

He soon found that if he wished to be successful with a specific chemical reagent, it would be necessary for him to discover a substance in which the *parasitotropic* properties were greatly in excess of the *organotropic*, i. e., the substance must have the power of killing the parasites (that is, be *parasitotropic*) without injuring the human organism in the least (in other words must not be *organotropic*.)

After many experiments in various directions, Ehrlich finally succeeded in preparing a substance in which, if used in the proper dosage, the *parasitotropic* property is greatly in the ascendency over the *organotropic*.

His early familiarity with dye-stuffs led him to experiment along these lines with this class of substances.

With animal experimentation and the discovery of the causative agent of syphilis the application of his ideas was made possible, for up to the most recent times the successful culturing of the specific organism of the disease had been a failure.

A rabbit can be inoculated in certain selected areas, notably the anterior chamber of the eye and the testicle. It was here that the experimental work was first done in regard to the application of "606" in the cure of syphilis.

Early Recognition of the Value of Arsenic and "606"

As is always the case in the treatment of disease, all possible drugs were tried upon people or infected animals. Ehrlich at once realized the value of arsenic, knowing its influence in surra (trypanosomiasis of horses) and in the sleeping sickness; also its value in syphilis. He commenced his experiments with atoxyl, which experimentation he found to be an entirely different substance from what Béchamp, its discoverer, thought it to be.

After trying some six hundred and five different chemical arsenic compounds Prof. Ehrlich finally succeeded in making "606,"

the now famous specific for syphilis. This substance is a pale yellow powder with the following formula: $C_{12}H_{12}O_2N_2As_2$. It is put up in ampoules and its solution must be used immediately after being prepared. It is best administered intravenously or intramuscularly in an alkaline solution, the former in a greatly diluted condition.

The dose varies from 0.002 Grams for infants intramuscularly to 0.45 to 0.6 Gm. intramuscularly for women. As much as 1.0 to 1.2 Grams have been given by the combined method (intravenously and intramuscularly) to men.

Its immediate effects in primary, secondary and tertiary syphilis are wonderful. I have been able to accomplish more in four days by a single injection of 0.75 Grams than I could in five to six months of continuous treatment with mercury.

In a bulletin from Ehrlich's laboratory, dated October 25, 1910, he says that forty thousand ampoules have been given away and that the substance is no longer in the experimental stage but that it occupies a distinct position in the world's therapeutics.

From my own personal experience and observation, extending over a period of more than four months, both in the clinics of Berlin and Frankfort and in my own practice here in Chicago, I believe the use of "606" is destined to become the dominant primary treatment for syphilis. Often it may be necessary to follow this remedy up with some form of mercury, but it is possible by one injection, if properly given and in properly selected cases, to sterilize absolutely these patients, at least for the time being, thus rendering them safe members of society. Up to the present time, in cases that are not already debilitated by disease, no evil effects have been observed.

What the future will bring forth in regard to the efficiency of this remedy time alone can tell. For the most successful application of "606" we require a careful examination of the lesion, an accurate diagnosis, made by finding the organism in the lesion before the secondary rash makes its appearance, and a careful and painstaking aseptic preparation of the substance to be injected.

Calcium Sulphide

"I Believe in the Curative Power of Medicines and Can Demonstrate It, even to a Christian Scientist, if He Has Nothing but the Itch"

By JOHN M. SHALLER, M. D., Denver, Colorado

WHETHER there is formation of pus, calcium sulphide should be given a trial. This is its chief indication. Gratifying results will follow more frequently than by the use of any other medicine.

In *follicular tonsillitis* calcium sulphide acts almost as a specific; and often in the course of twenty-four hours there is marked improvement, if not cure. In adults, 1-2-grain tablets should be given every hour until there is amelioration or until the sulphureted hydrogen evolving becomes so disagreeable as to produce nausea. The dose may then be given every two hours. When there is a rise of temperature, aconitine should be administered frequently enough to reduce fever, preferably in con-

junction with calcium sulphide. As this condition is an infection, and is shown by deposits of pus, cure may be brought about more rapidly by giving several small doses of calomel (gr. 1-6), followed by a saline laxative. Calcium sulphide alone will produce a complete cure whether there is fever or not, but it is an advantage to the patient to add such remedies as will greatly assist the dominant medicine indicated.

In *acne*, with formation of pus or where abscesses occur in successive crops, few remedies are as valuable in aborting or in curing these conditions. If symptoms are acute, with external redness or with tenderness and fever, 1-2 grain should be given every half hour until the sulphureted hydrogen becomes nauseating or otherwise dis-

agreeable. The object is to saturate the blood as quickly as agreeable, and to check the formation of pus, if possible.

To abort threatening pus formations, anticipate the formation. Administer this remedy when the first indications appear. If there are no marked inflammatory symptoms, the remedy need not be given so often. If the temperature is high, aconitine should be given. If there is fluctuation, the knife should be used. Where the formation of pus is apparent, and the quantity continues to increase, hot poultices will assist in terminating the process and in relieving the pain. One-half dram of a 5-percent solution of carbolic acid injected directly into the nodule with a hypodermic syringe, will check its progress if done before pus has formed. As soon as pus is present, however, nothing is to be gained by waiting and it should be evacuated under aseptic conditions.

In *bronchitis*, and particularly in *phthisis*, where the sputum is tenacious and ropy, and the cough hard and prolonged, calcium sulphide liquefies the sputum and makes the cough easier.

In chronic *abscess of the middle-ear*, calcium sulphide and nuclein will help to clear up the formation of pus when given in conjunction with local treatment. In inflammatory conditions of the *urinary tract*, where pus is found in the urine, whether its origin is in the kidneys, bladder or urethra, rapidly saturating the blood by repeating the dose of 1-2 grain every hour, and later every two hours, often will effect a cure. If gonorrhea is the cause of the inflammation, the results are equally gratifying. In an acute stage of gonorrhea, if fever is present, aconitine and calcium sulphide, given every hour until improvement or full physiological effects are manifest, is excellent treatment. In fact, calcium sulphide is an effective remedy to give as long as the discharge of pus continues.

In the treatment of *zymotic diseases*, calcium sulphide probably finds its most useful place. These diseases are very frequent during childhood; they often are dangerous and are followed by catarrhal sequelae that assume chronic conditions and remain so throughout life.

The first object in treating any acute febrile disease is to make the effort to abort it.

This can be done by using aconitine early in the course of the disease, in small doses frequently repeated. It is of no less importance to make efforts to prevent chronic conditions. If acute diseases are aborted, many chronic maladies are necessarily prevented.

Calcium sulphide is a remedy that should be given throughout measles, scarlet-fever, diphtheria and whooping-cough. No matter what other medicines are indicated, give calcium sulphide. In diphtheria, antitoxin should be administered as early as possible, and in large doses. Antitoxin aborts diphtheria, and to reap the best results there must be no hesitation or delay in its administration. Diphtheria kills quickly. Antitoxin cures quickly, much more so than any other remedy, but it must be given early in order to obtain the desired effects.

There is no doubt in the mind of the writer that when calcium sulphide is administered in the treatment of the contagious diseases of childhood, *it acts similarly to antitoxin*. That is, it increases the inherent power of the blood to destroy bacteria and their poisons. This is done by stimulating such blood-glands as the thyroid, spleen, suprarenal capsule and the lymphatic glands. At the same time, it acts beneficially on all the mucous glands and increases the quantity and modifies the character of their secretions.

The necessity of keeping the bowels aseptic is apparent. Calomel and laxative salines at the beginning always pave the way to milder conditions. The worse the catarrhal conditions of the nose and throat in these diseases, the more is calcium sulphide indicated. Sulphureted hydrogen that is evolved from calcium sulphide is eliminated from the blood chiefly by means of the mucous glands and the lungs. The breath gives the first indications that sulphureted hydrogen has entered the blood from the stomach and bowels. It is thus carried into and through every gland, and every nerve-center is stimulated and brings about new energy. It increases the activity of these structures. While it may be a slight germicide, its chief action in infectious diseases and in pus formations, is through the blood and the mucous glands.

The Nature and Treatment of Varicocele

Its Surgical Treatment Under Local Anesthesia

By **BENJAMIN H. BREAKSTONE, B. S., M. D., Chicago, Illinois**

Professor of Principles of Surgery and Clinical Surgery, Bennett Medical College;
Consulting Surgeon, Mary Thompson Hospital for Women; Attending Surgeon, Jefferson Park Hospital

EDITORIAL NOTE.—Dr. Breakstone's series of articles on "Everyday Surgery," of which this article is a part, is making a decided "hit." He describes the kind of surgery that the everyday doctor can do safely—and tells him how to go about it. Next month the subject of "Varicocele" will be continued. Every doctor reading this article will want the next one.

NOT every varicocele requires treatment. If a varicocele is detected early, before it has produced any symptoms, it may be cured without operation.

Varicocele occurs in more than ninety-five percent of the cases on the left side, and for this there are good anatomical reasons, as will be seen from the following considerations:

The Anatomy of Varicocele

The left spermatic vein empties into the renal vein at a right angle, so that the return circulation is impeded by the column of blood in the renal vein acting perpendicularly to that in the spermatic vein. The right spermatic vein empties directly into the ascending, or inferior, vena cava at an acute angle, and for that reason the return circulation is more free; that is, there is less resistance to overcome by the column of blood from the right spermatic vein.

Furthermore, the left spermatic vein, in its course upward, backward and inward, lies under the sigmoid flexure, and when the sigmoid flexure is full of feces, it naturally produces pressure on the left spermatic vein and thereby impedes the return circulation and causes the lower part of this vein to become varicosed in its effort to force the blood upward into the renal vein.

The Etiology of Varicocele

From the foregoing, it is evident that constipation is the most important factor in the causation of varicocele. There are other causes for varicocele, such as masturbation, insufficient sexual gratification, and so on; still, constipation is by far the most impor-

tant. Thus, if we are dealing with a varicocele early, and simply relieve the constipation, the former will also be relieved, if not cured. At any rate, it will not increase in size. It is needless to say that intraabdominal tumors may, by pressure, cause varicocele.

In an infant both sides of the scrotum are at the same level, but as soon as the boy begins to walk, the left testicle hangs somewhat lower than the right one. Hence, the upright position has also to do with the etiology of varicocele; the more so if constipation is present at the same time.

Symptomatology

The symptoms of varicocele I will not refer to at length. Very large varicoceles may produce no symptoms at all. In fact, the greater proportion of varicoceles are not productive of symptoms of themselves. However, as these cases occur most frequently either in masturbators or in men endeavoring to live a life of abstinence, the symptoms observed are largely mental or nervous; and I daresay that nine-tenths of the operations performed for varicocele are done to relieve these conditions rather than the actual ones to which the anatomic lesion may give rise.

Of course, if a varicocele is very large it may cause pressure upon the testicle, and that organ may then undergo softening. These, however, are of the rarer types of cases. More often the existence of a varicocele is first discovered only by the physician examining these nervous patients for some other trouble, and especially is this true of quacks.

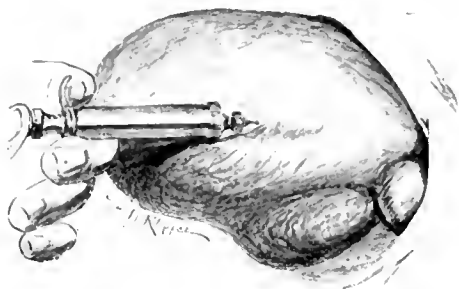


Fig. 1. Anesthetization of the line of incision

The physical signs of varicocele are so evident and can be so easily demonstrated to the patient that it is not necessary for me to dwell on the diagnosis.

Different Methods of Cure

Various methods have been employed for the cure of varicocele, such as injection, subcutaneous ligation, and operation. The injection method is the one practised by the quacks. The ligation method was in vogue before the days of aseptic surgery. Here, however, I will describe in this paper only the usual radical operation for varicocele, except that I perform the same under local anesthesia.

I wish to say here that more care should be exercised in this operation performed under a local anesthetic than in any other operation that will be described in this series. Very frequently, unless firmly tied and there is a sufficiency of tissue within the ligature, the ligatures will slip, and the hemorrhage resulting from such an accident is very difficult to control and almost always requires an open operation. For that reason also, hematoma frequently follows this operation when unskillfully and not very carefully performed.

I will describe two operations, one, the scrotal, the other, the suprapubic, the latter to be discussed next month.

The Technic of the Scrotal Operation

The anesthetizing solution is injected along the line of incision, which is on the anterior surface of the scrotum about midway between the median raphe and the external border, as shown in Figure 1.

When anesthesia is complete, the incision is made through the skin, superficial fascia, or dartos, down to the sheath, which contains the spermatic cord, and the pampiniform plexus of veins, as shown in Figure 2. This sheath is carefully incised and the veins are separated from the cord, or vas deferens, as shown in Figure 3. This must be very carefully done, as any injury to the vas deferens will be followed by a severe orchitis. The separation of the veins from the vas deferens must always be done in full sight, for if we should tie the latter or crush it with an artery-forceps, the testicle

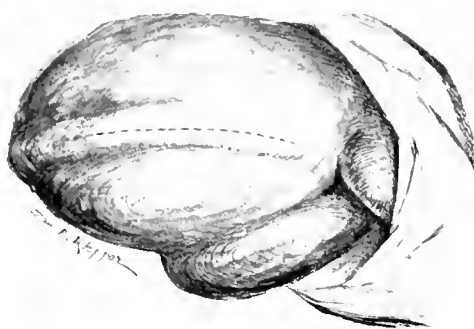


Fig. 2. The line of incision, now rendered anesthetic

on that side will undergo necrosis and therefore will later require removal.

Tying and Cutting the Veins

Next, as the vas deferens is held away from the plexus of veins forming the varicocele, with a loop of gauze or a very blunt hook

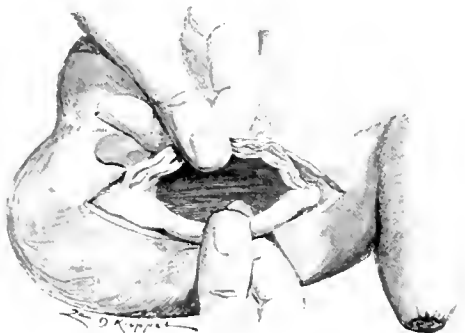


Fig. 3. The veins are separated from the cord

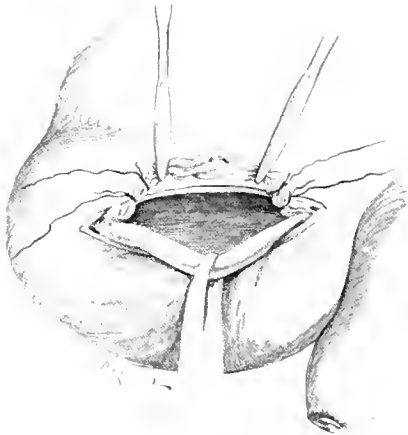


Fig. 4. Artery forceps applied between ligatures.

the lower portion of the veins is then tied in two places, to prevent slipping, and an artery-forceps is applied just on the distal side of these two ligatures. The same is done with the upper portion of the veins, as shown in Figure 4. We then cut the upper portion first, so that there may be no exudation into the wound, and then cut the lower portion, removing a section of veins from two to three and one-half inches long, as shown in Figure 5.

Uniting the Two Stumps

The two stumps are then tied together, and when that is done the left side of the scrotum will be raised up even to the right side of the scrotum, as shown in Figure 6. Then the wound is sutured with silkworm gut in the opposite direction to the way the incision was made, that is, transversely across the scrotum, as shown in Figure 7.

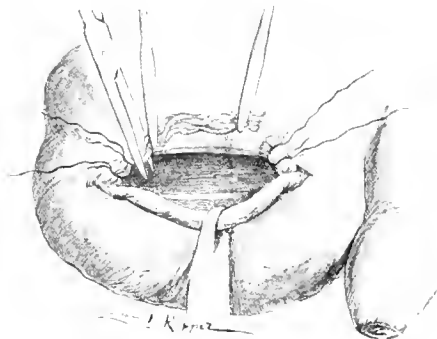


Fig. 5. A section of the veins is now removed.

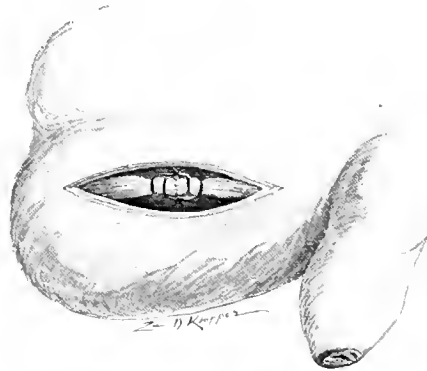


Fig. 6. The stumps are tied together by a special double suture.

It has been thought advisable in place of suturing the incision crosswise, in order to raise the scrotum on the left side higher than the scrotum on the right side, to remove a large part of the scrotum. Experience, however, has taught us that the skin and fascia of the scrotum are so elastic that it is only a short time after the operation, even after seven-eighths of that side of the scrotum has been removed, that it is just as large and long as it was before the operation.

As the veins are the most easily infected tissues, it becomes necessary in most cases to introduce drainage. If, however, the technic of the operation has been carried out according to strict asepsis, then drainage is not necessary. A dry dressing is then applied, a combination pad over that, and the patient is ordered to wear a sport suspensory. Twenty-four hours after the operation the entire scrotum will become

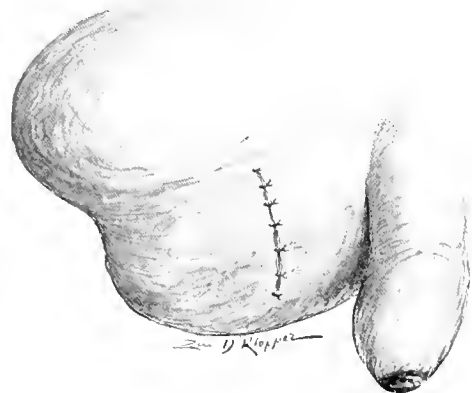


Fig. 7. The wound is finally closed.

ecchymotic. This will remain for several days and until collateral circulation will have been established, when the discoloration of the affected parts will largely disappear.

If the patient's occupation is one that requires physical exertion, it is best to have him rest for four or five days following the operation.

(To be Continued.)

Benjamin Smith Barton

The First of a New Series of "Familiar Talks about Famous Physicians"

By **GEORGE F. BUTLER, M. D., Wilmette, Illinois**

Head of the Department of Therapeutics and Professor of Preventive Medicine and Practice of Medicine in the Chicago College of Medicine and Surgery

EDITORIAL NOTE.—Of the long line of distinguished American writers on the subject of materia medica, Dr. Benjamin Smith Barton was practically the first, and like many of those who have followed him he was an original investigator. It seems peculiarly appropriate that Dr. Butler's scholarly study of this man's life should appear in the "Annual Progress Number" of "The American Journal of Clinical Medicine," whose principal object is the therapeutic betterment of the profession of medicine.

FAME comes ordinarily from continued devotion to its attainment along a single line of effort. It may not be, necessarily, that fame is the object sought, but the man to whom great distinction comes is, in almost every case, the great man of one idea. There are, however, exceptions to the rule and never was one more striking than in the case of Benjamin Smith Barton, the admitted father of Materia Medica in America, or, as perhaps better expressed, the father of American Materia Medica.

The man was a marvel among great students. Rarely in the history of scientific research has there been given such exhibition, as in his career, of versatility and many-sidedness in understanding and giving to the world the facts of nature and of life.

Weak of body almost from birth, he performed the full work of one man in half a dozen different fields; enthusiastic in whatever he undertook, he was yet one of the most cautious and conscientious of men in the tests of information acquired and in reaching his deductions; beginning with one end in view, his attraction toward a side issue so impelled him in its development that the result of his work in that direction became his monument; reaping his reward, fortunately, in time, famous before his death, it may be doubted if,

even then, he fully realized what portion of the work of his fine career it was for which he would be most widely and permanently known.

The Need of a Broad Education

It was as true a century ago as it is today that for one to be a truly great physician he should be broadly educated, liberal minded, skilled and interested in matters outside his own sphere of work.

A wide knowledge of our common humanity in all its aspects and workings is of much assistance in managing different classes of patients. Such knowledge cannot be obtained by reading medical books. We must study mankind by mixing with men, interesting ourselves in men's work, and by reading the best books on various subjects.

A physician should be so versatile and well read that he can intelligently discuss religion, politics, political economy, natural science, philosophy, music, poetry, history, literature in all its phases; in a word, his mental scenery should be large and capable of being readily shifted at will to suit the figures that move on the mental stage of his patient's mind. Dr. Barton closely approached being this kind of a doctor.

Benjamin Smith Barton was born in Lancaster, Pennsylvania, in 1766, and born

with such blood in him as might seem to justify his remarkable career. His father, the Rev. Thomas Barton, for twenty years rector of the leading episcopal church of Lancaster, was himself deeply interested in scientific pursuits, especially in mineralogy and botany, and was a member of different learned societies. His mother was a daughter of the noted astronomer, David Rittenhouse, and it may be that from her (since the theory prevails that it is from the mother the male child chiefly inherits its traits) came to the son Benjamin the remarkable qualities he developed in manhood. Both died before he had reached the age of fifteen, leaving him well provided for, a fortunate circumstance to which is due, doubtless, much of his accomplishment, since it enabled him, in later years, to call to his aid the quality of assistance he required in his researches.

He entered at once upon a course of education as comprehensive as was possible. Already he had developed a taste for the study of nature in her varied forms, but at first it was not possible that his inclinations in this direction should be fully gratified, since the typical scholastic course of the time must be followed as a matter of routine. He entered the York Academy, a classical institution of high standing, and there easily made his mark by his ready acquirement of the dead languages.

While faithful in his studies, young Barton was by no means content with what was to be learned within the walls of the academy. For him there was a greater school outside and, seizing every opportunity, he made his studies there. For acquirement of the sort of knowledge to which his natural bent inclined, he spent all the time he could in the fields and woods, devoting himself with an enthusiastic patience to the study of birds and plants and insects, and to the making of collections.

Here, again, he was favored in his observations beyond the ordinary student, for he was possessed of a natural skill in drawing and was thus enabled to secure a greater accuracy of record. (It is a curious circumstance, by the way, that his love of drawing and much of his instruction in the art was acquired from Major André, the British

spy, who was for a time a prisoner in Lancaster.) No doubt the direction of his future work was laid unconsciously in the country about York Academy.

In his study of nature he gradually acquired the idealism so characteristic of many other great scientists. Barton's modesty and unselfishness, his zeal and untiring industry, remind one of the great botanist Linnæus, who says in "*Critica Botanica*," "What do mortals desire in this world of change and vicissitude, the necessities of life being obtained, save that after death some gentle memory of them shall remain, some recollection of nobleness, that may survive corporeal decay. . . . Whatever labor it involves, however tedious and perplexing becomes the study of botany, I know not what devotion inspires us in its pursuit, until our love of the science merges in it all thought of self."

From College to the School of Nature

From York Academy young Barton went to the College of Philadelphia, from which he graduated, taking up the study of medicine while in continuance of his course. He was now reasonably well equipped for a struggle with the world.

But the education of Benjamin Smith Barton had only begun! Upon his graduation from the College of Philadelphia he found opportunity to accompany a commission appointed to survey the western boundary of Pennsylvania. Here was a field to his taste. He made the acquaintance of the Indians and sought from them the nature of the simples which had been employed by them from time unknown in their efforts to combat disease. It was this experience, it may be assured, which led the young student, despite his already extended studies—he was at this time only nineteen years of age—to a continuation of the researches which became a large part of his life work and resulted in the notable essay which made him the American pioneer in a great field: "*Collections for an Essay towards a Materia Medica of the United States*."

Still young Barton considered his education as only just begun. He went abroad and continued his studies in Edinburgh,

entering as a medical student. Here began the showing of his mettle and a first exhibition of his confidence in himself. Like the young hound first unleashed he plunged eagerly, not only into his studies, but also into the scientific discussion of his profession and of the day.

He issued a pamphlet with the somewhat cumbersome title of "Observations on Some Parts of Natural History: To which is Prefixed an Account of Some Considerable Vestiges of an Ancient Date, which have been discovered in different parts of North America." This was a long name for a small pamphlet, which in itself, as it chanced, was not very profound,

but such imposing titles were the fashion of the time. But there was more to come from the young man. He had become a member of the Royal Medical Society, and entered the contest for its Harveian prize, which he won by a dissertation on the *Hyoscyamus niger* of Linnæus (the black henbane). Then, for personal reasons not fully explained, he left Edinburgh for the celebrated University of Göttingen, in Germany, from which he graduated, taking his degree in the fall of 1789. There, so far as schools go, was an education for you!

And here it may be pertinent to consider what, after all, is the true purpose of that training included in the term "education." It has been wisely remarked that what we call "education" is often less important than what is denied the name. It is even of less consequence what is taught than is commonly supposed, and the true benefits of our schools and colleges, even of medical colleges, we do not discover until in riper life they are seen in far retrospect, the opin-

ion of Mr. Flexner and the Carnegie Foundation to the contrary notwithstanding. Education cannot be measured by what can be learned from books or inside the walls of a college in "Class A." Imagine for a moment the terror inspired by one who had assimilated

one or two works alone—an encyclopedia of medicine or Webster's Dictionary! Did you ever read of Christian Henry Heineken, or of Oldfield? A man of wonderful erudition is not necessarily well educated.

The vital desideratum of "education" is not so much to equip us for the "battle of life" as to shape in our hearts an exalted sense of honor and justice, and

by every possible means enshrine in our thoughts the ideal excellence of character without which learning is but an idle splendor.

"A physician," says Schiller, "whose horizon is bounded by an historical knowledge of the human machine, and who can only distinguish terminologically and locally the coarse wheels of this piece of intellectual clockwork, may be, perhaps, idolized by the mob; but he will never raise the Hippocratic art above the narrow sphere of a mere bread-earning craft."

Barton had not only enjoyed the advantages afforded by the best medical schools in the world at the time he lived, and had profited by these advantages, for he was an apt and earnest student, but he had, in addition, that higher education of which Plato speaks—"that education in virtue from youth upward which enables a man eagerly to pursue the ideal perfection."

He returned to America, and, settling in Philadelphia, began the practice of medicine



DR. BENJAMIN SMITH BARTON

at once, but did not long remain a practitioner solely. Despite his youth his reputation was wide. In the year of his return, when but twenty-four years of age, he was elected Professor of Natural History and Botany in the College of Philadelphia, the chair having been created with the special object of acquiring his services. Surely youthful ambition has rarely met with so great a reward as that!

This, it is said, was probably the first chair in Natural History in America, though not the first in Botany. Later, when the College of Philadelphia was incorporated with and included in the University of Pennsylvania, the professorship, with that of the chair of *Materia Medica*, was retained by Barton and held by him throughout his life, as was also the appointment which came later as one of the physicians of the Pennsylvania Hospital.

In 1813 occurred the death of the celebrated Dr. Benjamin Rush, and Professor Barton was elected to the vacant place, becoming professor of "The Theory and Practice of Medicine, and of Institutes and Clinical Medicine." He had reached, officially, the height of his profession!

But it was outside the direct practice of medicine and aside from any official prominence that Benjamin Smith Barton attained the lasting reputation which is justly his. As a highly educated "all round" man in a great field he had, in his time, no superior and possibly no peer. He had become a great botanist, was a great physician, and the combination of qualities enabled him to perform a work of which no other man at the time was capable. No other man, in fact, has accomplished it before or since his time. Discoveries in *materia medica* and drug therapy are still being and will be made, but they are the result of cooperation, the botanist supplying the suggestive material and the scientific physician the experiment and deduction, but they are two individuals and, furthermore, their efforts are not made together and generally the experiments are made with reference to a single natural production or a single disease. Here was a marvel of a man who did the work of both, and who covered the whole field, as far as his life's span would allow. His work was a

surpassing exception in the scope of scientific effort. He was the man in the field, the man in the laboratory and the man of deduction and application.

Dr. Barton's Greatest Book—The "Collections"

The "Collections" was originally read before the Philadelphia Medical Society, February 21, 1798, and, somewhat amended, was later published in a small volume of forty-nine pages. In 1803 appeared the "Elements of Botany," the first elementary work on this subject to appear in the United States. The two tell the story of Dr. Barton's at least partial conquest of a new and almost unlimited region of scientific research.

The preface of the "Collections" illustrates the character of the author. It is characterized by modesty and good sense, though by no means lacking in the scholar's dignity. Indeed, it is evident that he, himself, by no means realized the importance of the work in extending his reputation. He says with candor, and a degree of naïveté:

"I hope the following pages will be received as an earnest of my desire to extend our knowledge of the medical properties of the indigenous vegetables of the United States. I do not expect to acquire any reputation by the publication. Perhaps, in making this assertion, I shall not be doubted, when I confess that in everything which I have hitherto published, I have had reputation in view. If I have not acquired it, I have borne the disappointment with tranquil indifference."

Could anything be more charming than his misapprehension of what he had accomplished?

In the "Collections" Dr. Barton says plainly that he does "not repose implicit confidence in the half of what is said concerning the power of medicine," but points out the wisdom of investigating remedies in order to determine those of most value. He manifests the true scientific spirit by the simple statement that "the cultivation of science is the extension of my happiness."

Of the book itself, it may be said that it deals almost entirely with medicinal plants indigenous to the United States, toward

which he especially desired to turn the attention of American physicians. Among those mentioned are *geranium maculatum*, recommended as an astringent in the bowel troubles of children; *uva ursi* in nephritis; the bark of the *prunus virginiana*, in intermittents; *serpentaria*, as a tonic bitter; the *datura stramonium*, about whose properties the author is in doubt; *spiraea trifoliata*, used as an emetic; *podophyllum peltatum*, as a purge, best combined with calomel or the "crystals of tartar;" *iris versicolor*, classified doubtfully as a purgative; *senega*, diuretic, emetic, cathartic and expectorant; *lobelia syphilitica*, used in gonorrhea as a diuretic; and *spigelia* and *chenopodium* as anthelmintics.

The book proved popular and ran through a number of editions. The postscript to the third edition, published in 1810, gave a list of sixty-one plants described in the volume. All were native to the United States except one, and all possessed medicinal virtues except two, the *zea mays* (maize, or Indian corn) and *zizania aquatica*.

Dr. Barton's Assistants

The many official duties of Dr. Barton necessarily left him little time for outside work, personally, or the study of natural history save through the eyes of others, and it is fortunate for the world that he possessed the means for securing such eyes as he desired. Of those whom he called to his assistance the botanists Nuttall and Pursh were most prominent and, at his expense and under his direction, made extensive explorations, including no small portion of the United States and even parts of South America. Through them he added constantly to his collections and extended his investigations.

A pleasant incident of one of the trips of Nuttall was the discovery of a plant which seemed to have some of the aspects of a cactus, "growing all the way from the river Platte to the Andes, a plant about three feet high, whose splendid flower expands only in the evening, suddenly opening after remaining closed during the day and diffusing a most agreeable odor." This genus of plant, in proper and delicate recognition of his patron, he named "*Bartonia*," and

the last work of the great physician, written only three days before his death, was a communication to the American Philosophical Society, in which he discussed the plant which bore his name. When the time came for its presentation, it was read by W. P. C. Barton, his nephew.

The end of this able life came in 1815, when, had its possessor been a man of normal constitution, many more years of effort and accomplishment might reasonably have been expected of him. But his physique was weak; from childhood, even during his early years, he lacked the average strength, was often ill, was threatened with tuberculosis, and suffered, strangely enough, from gout, it may be as the result of hereditary influences. He was not, wise counsellor as he was for others, sufficiently regardful of his own health, overworking himself daily and, as he himself was compelled to admit, suffering "the pernicious consequences of his midnight and injudicious toils," and sacrificing his strength and vitality.

He had engaged earnestly, in the year named, in preparing a new series of lectures, and had delivered two courses, when he found it impossible to continue them. A severe hemorrhage gave the final warning and he sailed at once for France, hoping that the sea voyage and a more balmy climate might aid in his restoration. The hope proved futile and he returned, disheartened, in November. An illustration of his unflinching courage and tenacity of purpose was afforded by the fact that notwithstanding the desperate nature of his illness, which was accompanied by violent hemorrhages, he persisted in working. He was found dead in his bed the morning of December 19. His works, however, remain, and what gives them a special value is that they are reliable.

Doctor Barton was evermost cautious in accepting or giving conclusions as to the result of either his own inclinations or those of others. But, so great were his efforts and so well directed that the conclusions attained were many.

Personally the man was lovable. His literary style was careless—it was the matter rather than the style of the matter for which he cared—and, as a lecturer, he was by no

means striking. The information, though, was there. His face was singularly attractive, its features resembling somewhat those of the face of Goethe, and his manner was dignified but charming.

Dr. Barton was married in 1797 to a daughter of Edward Pennington of Philadelphia, and had at least the blessing of domestic happiness throughout his strenuous

career. Two children survived him, one of whom, Thomas Pennant Barton, collected the notable Shakespearean library now in the possession of the Boston Public Library.

Such was the quality of one of the most remarkable of Americans and one of the greatest of physicians, just claimant to the proud place of being, in a new field in one of the branches of his profession, a pioneer.

The Redbank Physicians' Protective Association

A Practical Plan for the Economic Betterment of the Medical Profession

By C. E. SAYERS, M. D., Hawthorn, Pennsylvania

EDITORIAL NOTE.—A number of physicians in Western Pennsylvania became dissatisfied over the constant price-cutting, the robbery they were suffering from the professional deadbeat, and the lack of harmony on other economic problems about which there ought to be agreement. They sought to find a plan under which they could "get together" and work together. The Redbank Protective Association is the result. It has grown very rapidly, and has promise of still wider growth. Dr. Sayers will tell about it in a series of papers, which it is hoped may be of service to other physicians in all parts of the country.

AFTER thirteen years of laborious practice in one of the busy mining districts among the hills of western Pennsylvania, meeting all the hardships which confront the country practitioner in such localities, and enduring all kinds of ill treatment, both from the profession and the laity, I became convinced that we of the medical profession were making a grave mistake, one which was gravely affecting us, morally, financially and professionally. How to correct this and get out of the rut into which we had so hopelessly fallen was a serious and puzzling question.

When I stopped to think of the many days and nights of incessant labor, of how I had traveled through all kinds of weather, over all kinds of roads, to relieve the suffering of people who seemed absolutely thankless, forty percent of my patients never, apparently, entertaining the least desire to remunerate me for my service, my courage would fail. When I went through my ledger with a view to sending out a few gentle reminders (and they had to be very gentle, too) to a few

of my best patrons, whom I selected very carefully and felt quite sure would be loyal enough not to turn a deaf ear to my supplication in time of serious need, it made me heart-sick to see so many long-standing accounts, representing days, weeks and sometimes months of strenuous effort to save life. Should I ever venture to tell some of these men of their indebtedness to me, my professional doom was sealed, so far as they were concerned. They would be up in arms and ready to wage a merciless and relentless warfare upon me, meanwhile employing some other physician who was not only willing to aid them in their attack upon me, but also to trust them as I had done. All this most unjust recompense just because I had asked for the money which I had earned and needed.

The Problem of the Deadbeat the Great Problem of the Doctor

What a pity it is that the physicians in this land of ours have not set their feet upon this kind of business long years ago and wiped it

off the earth. So long as this deadbeat class can find victims among the profession, just so long will they continue this kind of practice. Many thousands of dollars of hard-earned money represented by these accounts appeared upon my books and, like a hideous nightmare, haunted me day and night.

I was willing to work for the honest and deserving poor when they needed my service, even when there was little hope of any earthly reward; but to think of being compelled to answer every call of men whose incomes were larger than my own, whose families were attired far beyond anything I could dream of for mine, whose tables groaned beneath luxury, whose every want, however trivial and unnecessary, had first claim upon the monthly income, and whose thoughts were never of the physician except when they desired his service, was beyond human endurance. It was enough, if not to drive a man to distraction, at least to make him think there ought to be a better way. To find that way was no easy task.

I had talked to other physicians and knew that they, too, had grown weary of these conditions and were anxious for a change. After a thorough consideration of all the facts in the case, I concluded there was only one way left for us, and that was to formulate some plan that would be fair, honest, legal and right, then arouse other physicians and unite them in their own best interest. With this

purpose I prepared and read, by request, the following paper before the Clarion County (Pennsylvania) Medical Society:

The Financial Side of Medicine

"Mr. President, and Members of the Clarion County Medical Society: The theme which I wish to consider with you today is a very interesting one, to me at least, and I hope to make it interesting to you also before I close. There is no question but that the average physician is a capable man and qualified to diagnose and treat the average case that comes to him. But how few there are among us who can collect ninety-five to one hundred percent of our fees.

"Let us consider for a moment a few facts: If a physician has a \$4000 practice and collects 75 percent, he loses annually \$1000. Should he have a \$5000 practice, his loss will be just \$1250 each year. And should he be more fortunate and have a practice amounting to \$10,000 yearly, he suffers a loss of \$2500.

"It would be very nice to see this added to a bank account at the end of each year, would it not? If one were disposed to invest this amount annually, think of what it amounts to in the short space of ten years—the neat sum of \$25,000, which would be all clear gain, because the expenses are just the same whether you collect it or not. But if you do not collect it, you may be sure you cannot invest



Dr. C. E. Sayers, Hawthorne, Penn., President of the Redbank Physicians' Protective Association

it. No one can invest what he does not have, neither can he spend for luxury nor for a living that which belongs to him but which the other fellow holds in his hands to do with as he chooses instead of



Dr. J. M. E. Brown, New Bethlehem, Penn.,
Secretary of the Redbank Physicians'
Protective Association

paying the debts he justly owes. I cannot utilize that which I do not possess, for

"The fish that's in the sea
Affords no sustenance to me;
But when I make the sucker mine,
By magic, seine or line,
I may feast upon his substance
And dream of joys to be."

"Gentlemen, the one thing needful in the practice of medicine today is a better and more effective system for the collection of our fees. Why is it that a very large number of our profession are complete financial failures? That a large number are merely eking out a miserable existence? That a small number are simply living and getting along? That a still smaller number are making little more than a decent living? And that a *very* few are getting rich?

"Consider for a moment, if you will, the great expense of time and money required under present laws to qualify a man for this vocation in life. Eight long years of strenuous mental toil, together with an actual expense of from \$5000 to \$8000, means something to any man

who undertakes to enter the ranks of our profession. Even after he has obtained his credentials, he must equip an office, live, pay rent, and sit around for two or three years before he can obtain a practice that will afford him a respectable livelihood.

"What is the cause of the poverty in our profession? Can it be that the average physician is not honest? It may be true that some are not, but in my opinion the great majority are honest and honorable men and if treated justly by their colleagues and the laity, will prove themselves to be such. Is the physician not industrious? A few are not, but where is there a class of men who labor more incessantly than they? Can it be that he is not qualified, that he is not skilled, that he has missed his calling, or that he has become a drug-fiend or an inebriate? Oh no! These cannot be considered, ne'ther individually nor collectively, the principal causes.

How the Young Doctor is Hoodwinked

"It is not because the physician does not get work enough to do, as a rule, that he is poor and has trouble in getting along. Even in the beginning the young physician in the average locality gets plenty to do, for there is a time-honored heritage of deadbeats, rogues and shysters who fly to him for succor before the lettering on his sign gets weatherbeaten. The deadbeat comes to him because it is easier to change doctors than to pay doctor-bills. The rogue comes because he knows the young doctor is an easy mark. The shyster comes to tell him of the faults and failings of the older men and of what a good chance there is for him to build up a fine practice if only he doesn't charge too much. It is not because he does not get the work, but because he does not get his fees. And why doesn't he get his fees? Simply because he can't.

"Let us look for a moment at the conditions which exist within our ranks all over this state. Think of the jealousy, the antagonism, the rivalry, the rate-cutting, the trampling under foot of all ethical principles, the almost universal lack of professional dignity and honor, the continual sticking the knife into the other fellow, the general professional warfare. Is it any wonder that

we do not and cannot prosper financially under such conditions. The house that is divided against itself must fall. Ours cannot fall. It has always been down; we have never built it yet—financially speaking. Where is there an institution under heaven that could prosper with such discord within its ranks? Is there on earth another profession so forgetful of its own best interests?

The Doctor Almost the Only Price Cutter

"If the standard wage of the common laborer in any community is \$1.50 per day, you can't hire a man for less than that sum, no matter who or what he is. But when a physician knows the fee for a call in town is \$1.50 he often makes one for \$1.25, just to spite the other fellow and as 'a bid for trade.' If the price of potatoes is 75 cents, see if you can get them for less from any farmer of average intelligence. Go to a number of grocers in your own town and see if you can buy coffee, tea, sugar and other staples any cheaper from one man than from the others. Now, if men in these common occupations instinctively adhere to certain rules against rate-cutting, how much more ought the members of the medical profession, the highest calling aside from the ministry, to formulate and adhere to a code of ethics against such practices.

"We are living in an age of unionism. The mine workers, the iron workers, the teamsters, the carpenters, the railroad and street-car men, even the factory girls and farmers are all banded together into as many unions to battle for the protection of their rights. Let any company or corporation wrong one individual member of any union and see how quickly the entire force is up in arms against that company. Things often get mighty interesting before the matter is settled.

"But how, pray, has it been with the physician? Where is his protection? his union? When one of our class is wronged by a layman, how often do the rest of us stand off and point the finger of scorn at him, or make the bullets for someone else to shoot. How seldom do we come to his assistance, extend to him the helping right hand of fellowship, and, lifting him upon his feet, turn our weapons upon his adversary.

"Isn't it a dire shame that these conditions exist within our ranks? Look what it has cost us. Think of the hundreds and thousands of dollars of hard-earned money it has prevented us from collecting. Consider the shameful manner in which many of our profession have been and are still being dragged into our courts. And why is it? *Why?*

"More than seventy-five percent of the malpractice suits have been brought on by



Dr. J. Addick Wick, New Bethlehem, Penn.,
Treasurer of the Redbank Physicians'
Protective Association

the malicious influence of other physicians, who seldom stop to think that they may some day be the victims and reap what they have sown.

"How long shall we tolerate this hellish way of doing business? How much longer can we afford to be scapegoats, a laughing stock, for the rest of the world? Is it not high time that we awake to our responsibilities and duties to ourselves, our families, and our profession? Is it not high time for us to shake off the shackles of the old way

of doing things and arouse ourselves to a keen sense of our rightful duties toward each other as well as to the obligations due us from our patrons? Shall we continue under the present conditions which make the practice of medicine an enslaving drudgery, with a pittance for a recompense, a poorhouse as the heritage of old age, and a pauper's grave as a final resting place?

"As your President, it is my duty to point out the things which I consider most needful for your timely consideration, even this early in my administration, and I earnestly appeal to you, gentlemen, as a body of intelligent and fair-minded men, not to go home from this meeting today without having made up your minds to lend a helping hand to exterminate the deadbeat. If you will do this, gentlemen, you will not have cause to regret it, for to do this means to swell your bank accounts, to put yourselves in harmony with one of the world's greatest movements, to increase your self-respect and to command a higher regard from your colleagues and the better class of the laity.

"I wish to announce to you that nearly one hundred physicians, most of whom reside in the Redbank Valley, have decided not to endure these conditions any longer and have organized what is known as 'The Redbank Physicians' Protective Association.' This is a legal organization of physicians for their mutual benefit and protection and for the correction and prevention of wrongs which have heretofore been silently endured—an association, gentlemen, the purpose of which is the upholding of the high standard of the medical profession, its rights and its privileges, its duties and its obligations, and the establishment of a higher degree of ethical harmony and justice.

"The object and purpose of this association as set in its constitution is as follows, viz.:

"1. To form a more perfect organization.

"2. To establish justice between the members of the profession, and the profession and the laity.

"3. To create and maintain a uniform fee bill.

"4. To bring about and cultivate a better professional fellow-feeling and higher degree of ethical harmony.

"5. To provide for our common protection and defense against blackmailing, illegitimate malpractice litigation, deadbeatism, and the evils of an unreasonable credit system.

"6. To promote our general welfare.

"7. To secure a more prompt settlement from our delinquent debtors, and the blessings of liberty and prosperity to ourselves, our posterity and profession.

"The principles of this association are found in the body's constitutional declaration of rights and these have been epitomized as follows:

Declaration of Rights

In order that the great and essential principles of Right and Justice existing between the members of our profession, and our profession and the laity be recognized, maintained, unalterably established, and invariably executed, we declare that:

Sec. 1. The laborer being worthy of his hire, a reasonable remuneration shall be expected for a reasonable service rendered.

Sec. 2. The remuneration is due and ought to be paid when the service is completed—and should it not be,

Sec. 3. A prompt settlement should be effected and a reasonable time agreed upon, at the expiration of which the physician has a right to look for and expect his pay.

Sec. 4. It is not right that the physician's claim should be the last, or even among the last, to be paid; but it shall and of right ought to be, if not the first, among the first to be paid or satisfactorily adjusted.

Sec. 5. No member of the laity has any right to expect the services of a physician whom he refuses to pay or give a satisfactory settlement when asked to so do.

Sec. 6. It shall be the rightful duty of every member of this Association to be lenient with the honest and deserving poor, but he shall also make it his rightful duty to be on the alert for and to defend himself against the deadbeat, the dishonest rogue, the shyster and the maligner.

Sec. 7. It is not right nor just, when a physician has done his best under the circumstances for his patient, that he be made the victim of a blackmailing or a malpractice scheme; and should any member hereof be thus victimized wrongfully, illegally, or maliciously, it shall be the rightful and bounden duty of each and every other member of this Association to aid and assist in every reasonable way in his defense.

Sec. 8. Since it is right for men to combine their forces for greater strength in the affairs of state and church, capital and labor, it is likewise just and right for us as physicians, in the face of the present prevalence of deadbeatism and the defective credit system now in common use, to organize for our mutual benefit and protection against these dangerous and blighting evils, and for the good of the community at large.

Sec. 9. The laws, rules, and regulations governing this Association shall be impartial, equal just and right.

Sec. 10. No arbitrary decisions shall be rendered; no partial judgments given; no excessive fines nor undue punishments imposed.

Sec. 11. All members hereof shall be equal, shall enjoy in common the benefits, privileges and protection of the Association, and shall receive like punishments for like offenses.

Sec. 12. It shall henceforth be our rightful and bounden duty to treat each other as members of a common brotherhood, fraternally, honorably, fairly, professionally and ethically, and to this end and for this purpose do hereby select and adopt for our guidance the Code of Medical Ethics approved by the American Medical Association and agree that the same shall be our high standard of future conduct.

Sec. 13. All controversies arising between members of this Association shall be heard, acted upon, and decided by a Judiciary Committee composed of three disinterested members hereof, and the appeals therefrom by the Association acting as a court of last resort.

"As a result of this organization, we have at present a harmony never before known in this valley. There exists a fraternal feeling among the members on every hand. Old grudges have been dropped, old sores are healing up, and we are making it hot for the deadbeat. Now when we call a consultation we do not look for a fist fight in the sick-room, nor does our consultant go away and condemn our diagnosis, treatment and fees. We have taken up the Postgraduate Course published by THE AMERICAN JOURNAL OF CLINICAL MEDICINE and expect to reap much benefit from the same.

"As to collections, we have found this the best means ever yet employed by any one of us. Our method is plain, simple and legitimate. It has been passed upon by one of the most brilliant lawyers of western Pennsylvania and pronounced strictly in harmony with all existing law on the statute books of our state. Since our existence we have turned several thousand dollars of bad accounts into good money. These included not only accounts long past due and uncollectable, but many which were outlawed. We have now upon our books accounts amounting to several thousand dollars more, of which we expect to collect a good percentage during the present year. In brief—

The Realized Advantages of Our Association Are as Follows

"1. *The positive ability to collect dead accounts even from deadbeats.* By this we

mean the collection of outlawed accounts from people who were never known to pay an honest debt that they could in any way avoid. Under our plans they pay without being coaxed and are glad to do so.

"2. *A great reduction in deadbeat practice.* This is a great advantage. Where is there a physician who has not lost many a call to a good paying patient while he was fooling time away with some trivial case, having a deadbeat for a paymaster. When once a deadbeat knows he has to pay his debts like other people he will not call a physician until he actually needs his services.

"3. *A more prompt payment from good but slow-paying debtors.* When these patrons hear of the association and its workings, they are stimulated to pay up lest they be classed with the deadbeat. This all comes about in a perfectly natural way without any special effort on the part of the physician whom he owes. Formerly we had to call the attention of this class of patrons to their accounts. Now they come and ask for their bill and are ready pay.

"4. *A higher degree of respect from the better class of laymen.* There is among the better classes a feeling that they have to pay for those that will not. Now that the deadbeat is compelled to put his money into the proper channels, cutting off some of his beer and whisky bills and putting his wages to paying the legitimate and necessary expenses of his wife and family which other people had to pay before, they feel much better toward us, seeing that we are trying to use all alike. Many a layman has said: 'I am glad you did this. I am tired of paying the bills of those fellows. They ought to pay for what they get just the same as I must.'

"5. *The advantage of being in harmony with the present wave of unionism.* Today nearly every man you meet is a union man of some kind. Union men as a rule have more confidence and respect for union than nonunion men. It does not do us any harm to be called union men, and it does do a lot of good.

"6. *The high degree of ethical harmony existing among its members.* By meeting once a week and talking over our troubles,

they are soon a thing of the past. Quarrels and misunderstandings are much less frequent, and we respect each other's rights.

"7. *Fairness in consultations.* We do not fear that our consultant will steal the case. We have passed a resolution to the contrary.

"8. *The assistance rendered each other in the handling of deadbeat accounts.* The attending physician is the man who has the confidence if any one has more than another. He can often get a patient to do what no one else can—even to the paying of an old outlawed account.

"9. *The fraternal assistance rendered in the defense of a member's reputation and character when these are assailed.* When a patient comes to a physician with a load of slanderous falsehoods about some other physician, he should be aware, lest he fall a victim to this same vicious tongue. A word or two at the right time will stop it all.

"10. *The advantage of weekly consultations on the financial question.* In this way we get to know who is honest and who is not; who is worthy of credit and who is not. The deadbeats tell each other who is an easy mark. We have the same right to keep track of them, and we do. Occasionally we find one who has 'deadbeated' every doctor within a radius of ten miles.

"11. *A great reduction in the actual number of deadbeats.* When they once know that we take cognizance of them and their doings, they experience a very sudden change of heart as to paying up—mostly when they have to. Deadbeating is somewhat of a contagion. When one fellow knows that another gets along without paying his bills he tries the same plan. On the other hand, when he sees that the other fellow got caught, he may take warning and reform before it is too late.

"12. *A better conscience and peace of mind.* One member of the Association said to me the other day: 'Before I joined the R. P. P. A., I felt like a thief when I met another physician. I was thinking all the time he was going somewhere to steal my case. Now, since we have got together and are better acquainted, I do not feel that way.' The fact is, we all feel better since we have left off those little unprofessional tricks. We never gained anything by them. We were always the worse off both morally and financially while we practised them.

"Now, gentlemen, I leave this question with you. Think it over carefully and be sure that you decide it in a way that will be for the best."

(*To be Continued.*)

"**H**E who backbites an absent friend, who does not defend him when attacked, who seeks eagerly to raise the senseless laugh, and acquire the fame of wit, who can invent an imaginary romance, who cannot keep a friend's secret; that man is a scoundrel! Mark him, Roman, and avoid him."—Horace.

A Specific Treatment for Tuberculosis

A Preliminary Report

By W. C. GOODWIN, A. B., M. D., Philadelphia, Pennsylvania

EDITORIAL NOTE.—We present this report without comment and on its own merit. The brilliant results of the author and the means by which he accomplished them are not only interesting but very gratifying to us, since they confirm a position which we have held for many years. Dr. Goodwin's interesting hypothesis concerning the *modus operandi* of the remedies employed of course needs further and detailed investigation before its general acceptance can be hoped for. Meanwhile we congratulate the Doctor on his excellent showing. Whatever the explanation, those who use these remedies know their value in the treatment of tuberculosis.

THE writer has given the subject of tuberculosis special attention during the last four years and fully realizes the significance of the following paper; and he has entire confidence in addressing it to unbiased physicians everywhere, for the common weal.

The Significance of the Fever in Tuberculosis

That tuberculosis is a contagious and preventable disease is acknowledged. We now come to further facts, namely, first, that there are drugs that specifically kill the bacilli; and, second, that the tubercle bacillus does not of itself, cause fever, and that when a fever exists it is due either to a mixed infection or to direct infection, such as absorption from an enteric ulcer (possibly excepting tuberculous meningitis), and that, therefore, tuberculous enteritis can and must be diagnosed by the characteristic fever-curve that we call tuberculous. Miliary tuberculosis, or "galloping consumption," is the result of a double infection, principally of the lungs and intestinal tract, and the fever is an index of the extent of the intestinal involvement.

On June 20, 1909, a patient was admitted to the wards of the Phipps Institute and placed under my care. She remained about two weeks, then returned to her home a few squares away. During the first month of observation the cough and expectoration slowly increased and tympany near the apices of both lungs extended.

Our ever-pressing need in these conditions compelled a continual search for a remedy. A circular was asked for and obtained, describing iodized calcium. The statement

was made that it relieves the cough in phthisis. Calcium sulphide was there described as the most powerful internal antiseptic known. It was further said that this drug might advantageously be used in consumption, but that it would not cure this affection. A clinical test was made at the earliest opportunity.

As a preliminary, I may say that calcium sulphide is not well absorbed in larger granules than of 1-6 grain size. Properly made, the pellets should be hard, brittle, and on being crushed have a strong odor of sulphureted hydrogen. The bottle containing it should have no odor when uncorked. Unless these points are closely watched no results can be expected. Very few manufacturers, I may add, put out a good product. Several samples from various sources examined during the past few months proved valueless, being little more than gypsum.

The dosage of this drug for an average patient is 1-2 grain hourly during the day and 1-2 grain every three hours at night. A little larger dosage was used at first, but 1-2 grain is as much as can be borne for such long periods as are necessary for the tuberculous patient. It is not easily swallowed. The granules should be safely washed into the stomach by a mouthful of water, as the odor and taste are objectionable—when these are noticed, the sulphide pill has lodged in the throat.

The Results in the First Case

July 20, 1909, both the preparations just named were given, the iodized calcium to be used only when the cough could not be re-

pressed. At the end of three weeks an examination showed relief from the cough; an improved appetite; a plain gain in weight; an increase in the area of tympany about the cavities (which always occurs); diminution in the number of the fine, subcrepitant râles, leaving only the larger râles and friction-rubs; there was also plainly less moisture on the lungs. This order of change is typical. The patient continued improving steadily until on November 1, she weighed 130 pounds, this being an increase over the initial 110 pounds. On the 18th of November the woman went shopping.

August 1, 1909, the same treatment was applied in other patients. One case (No. 2) in the Phipps ward differed from the preceding principally in that there was a fever ranging from 102° F. in the morning to 103° F. in the evening. Here, too, like results as in Case No. 1 were obtained. Cough was relieved, respiration dropping from 38 to 26. Lung examination showed corresponding improvement. The fever, however, continued, steadily increasing until death, which occurred about September 16. What did this mean? Why did not calcium sulphide reduce the fever as well as the respiratory rate? And what was the cause of the fever?

As elucidating these questions, another ward case (No. 3) followed, in which a diagnosis of tuberculous enteritis, with fever of course, had forced its recognition. An autopsy confirmed the diagnosis. Now, what before had been suspected, now became a certainty. In the first place, the tubercle bacillus of itself never causes fever (tuberculous meningitis with its direct action on the thermogenic centers possibly being excepted); and, secondly, when fever is present it is always explained by a mixed infection or by direct infection, the fever always coming from the introducing cause.

Why, we may now ask, should not the enteric ulcer produce a fever, since it is always in direct contact with the intestinal contents? Calcium sulphide, in this instance, did kill the bacillus, as proved by sputum examinations and lung changes; but this bactericide could not meet the conditions presented by the enteric ulcer, where the blood supply is below normal and the infection from the bowel present.

Clearly, an intestinal antiseptic was needed; and sodium sulphocarbolate was selected and for these reasons: (1) It is the most powerful intestinal antiseptic known. (2) There is practically no absorption of the drug up to the point of physiological tolerance. (3) The quantity tolerated is greater than that of any other such antiseptic known. The sulphocarbolate may be administered with perfect safety to the average patient in hourly 5-grain doses for months. It is most effective when crushed in the mouth and thoroughly mixed with saliva and, though bitter and salty while in the mouth, it is followed by a very pleasant taste, a fact of enormous importance to the patient.

One quality of this salt, however, must be borne in mind, namely, in one patient in about five or six it will at first cause a diarrhea when given in 5-grain hourly doses. But this result may be overcome by a tablet containing 4 grains of the sodium salt combined with 1 grain of the zinc sulphocarbolate.

Under this treatment, as weeks pass, the whole intestinal tract improves; coated tongue, fetid breath, eructation of gas, pyrosis and borborygmus disappear. Both a mild constipation as well as a mild diarrhea are corrected, and the stools become yellow and mushy, that is, normal. All these effects are observed in addition to its great germ-killing powers.

The Three Remedies Used Together

The next ward patient (No. 4) was a woman, light mulatto, aged about 30, whose fever ranged from 99° to 100° F in the afternoon. She was given calcium sulphide, iodized calcium and sodium sulphocarbolate, the full treatment. In two weeks her temperature dropped to normal for a period of twenty-four hours, when opportunity for further observation ceased.

All private patients were now given the same treatment. The results have been singularly uniform and satisfactory. As convalescence progresses, the patients remind one of the stages in recovery from serious attacks of typhoid fever or other infectious diseases.

Let no one imagine, however, that enteric tuberculous ulcers can be easily cured. In most instances four to six months, or longer,

are necessary to heal them completely; the time depending, of course, on the intelligence, self-control and vital powers of the patient, as well as on the care and skill of the physician.

The important point is the consistency and frequency of the stool. A slight constipation is as much to be avoided as a slight diarrhea; and healing will not take place where either is present. There should be but one stool daily.

In cases where moist râles and ulcers are present, *absolute* rest, sleep and forced feeding must be insisted upon, if any results are to be expected. In convalescing periods, too, the patients must be constantly restrained, as they have no idea of their own weakness. A reckless exposure in the case of a patient of one of my colleagues was followed by death from pneumonia.

During the last fifteen months 85 cases have been seen, 5 in consultation. Of these, 11, in the incipient stage, are so completely healed that no one can detect the previous presence of the lesion. In addition, there are 16 cases still under treatment where the disease had already so far progressed that no remedy can conceal the destroyed tissue, and that ample evidence of the advance of the infectious process and the strength of the remedy that arrested it will always remain.

These results, too, let it be borne in mind, are taken from an ordinary city practice, with no possible chance for selection, and no special power to secure a favorable environment. There were only such opportunities as are open to any other physician in an orderly community. Consequently, this article is written not only to the specialists of the sanitariums, but to every practitioner with an unprejudiced mind and power to note the effect of the remedies.

A Few Illustrative Cases

The following cases are selected for illustration:

Case 1 was sent, October 16, 1909, by his employer, who had been conversant with the results and treatment described in this paper. These notes were made: Male, colored; nativity, Philadelphia; family history, negative; cough; loss of weight; pain at angle of the right scapula (increased on riding a

bicycle); loss of appetite; feeling of malaise. Examination showed a few fine subcrepitant râles at the right apex and near the angle of the right scapula. Areas of increased vocal resonance, slightly shortened inspiration and slightly prolonged expiration. The Von Pirquet test was positive; sputum, negative; pulse, 85; respiration, 20; temperature, 36.9°C.; weight, 135 pounds.

The patient was placed under the usual treatment, viz.; iodized calcium (2-grain tablets), calcium sulphide (1-2-grain hourly), and sodium sulphocarbolate (5 grains every two hours); instructions to use eggs and milk for nourishment, and to rest and sleep all that he could. He returned every month for examination and observation until May 19, 1910, when adventitious sounds had disappeared. Since then he has been doing the severest manual labor. Examination made October 10, showed conditions unchanged, although he was encouraged to repeat the treatment for another month or more, "to make assurance doubly sure."

Improvement in a First-Stage Case

Case 2. First seen December 5, 1909; male; white; aged 19; native of Philadelphia; weight, 121 pounds; slightly pale appearance; complained of poor appetite, loss of weight; feeling of malaise, slight cough. The thorax was narrow; breathing largely abdominal; supra- and infraclavicular fossæ enlarged. Examination showed increased vocal resonance over the apices of both lungs, extending to below the angle of the scapula, anteriorly to the third rib. The Von Pirquet test was positive; sputum, negative; respiration, 20; pulse, 80; temperature, 36.9°C.

The patient was placed under the usual treatment, and a few days later went south for the winter. In April he returned greatly improved; examination, however, still showed marked areas of increased vocal resonance. At times neglectful, on the whole he followed treatment fairly well. An examination September 26, 1910, showed no pathologic signs. Present weight, 133 pounds.

Another Favorable Case

Case 3 was that of Mrs. A., aged 22; white; native of New Jersey; family history, negative. She was then nursing a friend with

a bad case of tuberculosis. She complained of cough, loss of weight, paleness, lack of appetite, feeling of malaise and sleeplessness. Chest examination showed fine, dry subcrepitant râles and an area in the right chest of increased vocal resonance, with impaired resonance. Her weight was 121 pounds; the Von Pirquet test positive; sputum, negative; pulse, 80; respiration 20, temperature, 36.9° C.

The woman was given the usual treatment, and when seen one month later had improved in appetite and her paleness had disappeared. She showed an increase in weight of seven pounds at the end of the second month. She was seen again October 11, 1910. The examination gave negative results; weight was 137½ pounds. She is a shirtwaist operator.

Masturbation as a Complication

Case 4, accepted Jan. 10, 1910; male; aged 39; American; expression sulky; history very difficult to elicit and requiring the most careful analysis. There were a number of hemorrhages in the preceding four or five years, but they must have been either infrequent or very light, judging from the general condition. The man complained of cough, sleeplessness, nervousness, loss of weight and weakness. Examination developed the following: Cavity in the left chest, at third rib, midclavicular line; fine, subcrepitant and large, moist râles extending anteriorly to the fifth rib. Over the right lung, impaired resonance to third rib and a few fine râles. Posteriorly, an occasional friction-rub, with râles extending to eighth rib on the left. Pulse, 130; respiration, 24; temperature, 102° F. at 9 p. m.; sputum, positive.

There was no such improvement during the first two weeks as should have been; so the nurse was instructed to take pulse, respiration and temperature every three hours. Urine examinations showed quantities of spermatozoa. Under constant watching, the fever disappeared gradually, except in the afternoon. In six weeks from the beginning of treatment the sputum became negative, which is sooner than may usually be expected. On two succeeding days, under special watchfulness, there was no rise

in temperature until after 7 p. m., with a record of 101° F. at 9 p. m. The paroxysms of masturbation can be detected by pallor, coldness of hands and feet, rapid pulse, peculiar expression, and a rise in temperature beginning in about thirty minutes. A typical fever-chart was furnished.

Three other cases, one just before and one somewhat later, showed the same symptoms, and all resulted in death, although there was ample time for the treatment to have saved, had this been possible without the patient's cooperation.

A Confirmed Case: Relief

Case 5. Female, aged 28; mother of one child, aged one year. There was a history of diarrhea for the preceding four years, with tenderness over abdomen, which had been greatly increased during childbirth. Recently she had spent six weeks in the wards of the Pennsylvania Hospital, and was listed by the city board of health as an unsanitary and objectionable tuberculosis patient.

The apices of both lungs showed a very slight involvement; a few fine, dry râles, with increased vocal resonance; the sputum was negative, and the Von Pirquet test positive. The woman complained of great weakness, lack of appetite, loss of weight, constant diarrhea (eight to ten stools); was slightly relieved by complete rest. The fever was 101.3° F. in the evening. There was marked tenderness over the abdomen along the line of the transverse colon over the epigastrium and about McBurney's point, though the whole abdomen was more or less tender. As in most of this class of people, control was difficult, and thus, on Jan. 31, 1910, the fever had increased to 102.7° F. at 5 p. m.

Under special pressure she gave up all housework, sent her child to her mother and went to bed. A diet of milk and eggs was insisted upon, as it should be in all such cases. The woman found confinement to bed irksome; but the gradual abatement of the abdominal pain greatly aided in assuring complete rest, and as months passed she became quite tractable. Her appetite increased and also the weight. Pulse, respiration and temperature were normal June 12,

and remained so until July 2. She is suspicious and untrustworthy and has been seen but once since, although I am informed that she is quite stout and strong. She, herself, thinks her present good health is due to another and later physician.

Another Relatively Mild Case

Case 6. Accepted April 24, 1910; male, colored; nativity, Maryland; aged 23. Complaints of sore throat, loss of weight, cough, feeling of malaise, lack of appetite, fever. (The patient had been seen a week earlier in an attack of grip, when the fever was very noticeable.) The pulse was 112, respiration, 20; temperature, 100° F.; the sputum was positive. Examination showed a small cavity over the right apex, with impaired resonance to the third rib anteriorly. Posteriorly were many râles on the left side, extending to the eighth rib, and on the right side to the spine of the scapula. Inspiration was slightly shortened, expiration prolonged.

The man showed very great improvement in his general appearance; and June 9 the pulse was 96, respiration 18, and temperature 99° F. The sputum was negative;

which is an unusual record, as he was doing his regular work as errand boy. It was difficult to convince him of the necessity of coming to the office while feeling so well. There was, however, an occasional opportunity for seeing and speaking with him on the street, and thus knowing that he took the medicine regularly. The next examination was made October 16, when sputum was negative, there was no cough, pulse 80, respiration 18, temperature 98.3° F. An occasional râle was heard posteriorly near the apex, and the area of increased vocal resonance as in the chart. He looks well.

The record, to recapitulate, is as follows: 85 cases have been seen during the past fifteen months, 5 of which were consultations. Of these, 11 are completely healed; 16 are convalescing; 11 deaths, including the three cases from masturbation mentioned above. Of these, 8 patients were all *in extremis* when first seen, only one living six weeks after the first visit.

The 42 remaining cases can be explained under the general terms of lack of money, personal indifference and ignorance. Reflection reveals what this means for humanity.

The Treatment of Tuberculosis

By WILLIAM F. WAUGH, A. M., M. D., Chicago, Illinois

Dean and Professor of Therapeutics, Bennett Medical College

THE progress of mankind along the line of evolution is denoted by the change from superstition and credulity toward knowledge and reason, from the far-fetched and incomprehensible to an understanding of the familiar things close at hand. So we have exchanged the ancient prescription with one hundred and forty-seven ingredients, given in the hope that some one among them might, perchance, hit, to the single remedy administered because we *know* it will meet the need; we have dropped witchcraft and demonology as the cause of disease and detected the microbe; we have ceased to talk of fomites and miasms and found the source of infection in the virus distributed by the mosquito and the house-fly.

In accordance with this movement, we have, after trying remedial measures innumerable, concluded that God's fresh air and sunlight on such a glorious day as this are worth more than all the remedies concocted by the pharmacist. But in swinging to this side we have, as is usual, swung too far. We talked climate a few years ago to such an extent that we packed dying men off to the ends of the earth in the vain effort to secure an impossible cure. We overlooked the fact that the best climate for any human being was that in which he was raised, that to which he had become inured, and in which he had to earn his living.

At the time climate was preached as the only thing necessary for the cure of tuberculous patients, true to the destiny that seems

to place me almost always on the unpopular side of every question, I had to oppose it and say, as I thought and still believe, that the very best climate for every patient is the immediate vicinity of the physician who best understands the case. Were I to find myself tuberculous today, I should look for my best climate as near as I could locate to Dr. William Porter.

One of the most important observations of the day is that cold air is not *per se* injurious to the consumptive. Still, it is not well that the patient should lower his vital resistance and sap his vitality by exposure to too cold air or for too long time. The open air and sunlight form the best means of destroying the ubiquitous microorganism, and that climate that gives the most hours of possible exposure to the sun in the open is the best for the patient. Altitude has less to do with it than many suppose. True, there are few deaths from tuberculosis in the elevated districts, and the higher we climb the fewer are such deaths; but that is because there are fewer people living there. The vast majority of the world's population resides less than 5,000 feet above the sea-level, and very few above 10,000 feet elevation. The significance of the fact that even among these few the tubercle bacillus found victims was ignored, and we kept urging the "lunger" to climb higher and higher yet until he took the final step—upward we trust—into the regions where the bacillus does not domicile.

The Discovery of the Tubercle Bacillus

When the tubercle bacillus was discovered our hopes took a leap. Here was something tangible against which we could direct our therapeutics. A microbe caused the malady—well, kill the microbe!

But while most of us took that view, some saw behind the bacillus a reason why it should attack some persons and not attack others. We saw here a lack of vitality that took away the resisting power of the one and rendered him liable to the action of the bacillus; sometimes molecular death in an individual whose race was run, the germ being merely an epiphenomenon.

Meanwhile every effort at direct germicidal treatment had failed, and it became evident that the case was by no means so

simple as it had appeared. Iodine, gold, mercury, platinum, phosphorus, creosote and its derivatives, and many other direct germicides have been given with free hand in the effort to destroy the germ in the patient's body, but it survives all attacks by agents not destructive of the patient's life itself. Every suggestion along this line has been run out and has failed, with just one exception.

Last year a medical missionary in Syria, Dr. Ussher, announced that he had succeeded in controlling and preventing the outbreak of typhus, scarlatina and smallpox by saturating the patients and those exposed to the infection, with calcium sulphide. Others have confirmed this statement and extended the method to other infections.

There is no known reason for excepting the tubercle germ as immune against the action of this remedy, but the trial is yet to be made.

Instead of directly attacking the bacillus, we now seek to increase the resisting powers of the patient that he may be the better able to combat the cause of the disease.

Ward's Method of Treatment

Perhaps the most recent and the most scientific method of accomplishing this object is Prof. Ward's intravenous injection of nuclein solution. I had the pleasure of listening to his paper as delivered before the Chicago Academy of Medicine last winter, and have since followed his work carefully. I now believe that in nuclein we have the best method as yet devised for combating the bacilli and also of building up the forces of the patient. The intravenous injection of the solution may at first be difficult to those unaccustomed to it, but if they persevere until the technic is mastered, they will find it satisfactory.

Prof. Ward carefully studied his patients for a long time, and found in the tuberculous certain well-defined and uniform alterations of the blood characterizing them. The red blood-cells and the hemoglobin were reduced as was also the specific gravity, while the number and proportion of deformed or imperfect cells was largely increased. He then began the administration of nuclein solution, and found under its use increasing approximation to the healthy standard in all the particulars mentioned, while the bacilli

in the sputa became fewer and the symptoms improved concomitantly, until, as the blood became normal, the evidences of the malady had ceased.

While nuclein has been known to increase leukocytosis, since Vaughan first called attention to it, Ward is the first to discover its influence upon the red blood-corpuscles. His method appears at the least to be worthy of trial and study; which is all that can be said of any newly introduced method of therapeutics.

Treat the Individual

In every case, no matter what may be the treatment adopted, it is essential that the most minute attention be paid to the individual patient, and every means be employed to increase his general stock of health. This is too apt to be neglected in the search for specifics. No matter what good may inhere in tuberculin, nuclein, sulphides, or any other remedy, the general health must be looked to.

As to this, no single measure so immediately and radically alters the aspect of the case for the better as does emptying and disinfecting the alimentary canal. Do this, see that the kidneys and the skin are eliminating their full share, and the improvement in appetite and digestion that follows is impressive. Then see that the diet is regulated closely by the patient's capacity for digesting and assimilating food, instead of senselessly stuffing his stomach with more than it can manage. The problem of scientific feeding differs with each individual patient, and always requires study.

Finally, we have the study and treatment of the symptoms presenting themselves.

I believe in the careful, thorough, daily study of the patient, and the application of such remedies as are indicated by the conditions found.

I believe thoroughly in the use of drugs—the right drugs, given always with knowledge and purpose, never by rote. Fever, night sweats, cough, hemorrhage, are to be restrained within proper limits. Every element that makes for debility means an advantage given the invading bacilli. Exercise during fever depresses the vitality below the resisting point, and a fresh invasion results.

Many drugs find their place in the treatment of this protean malady. I persistently preached the value of drugs during the period when the profession was insisting that there was no use for them in the treatment of tuberculosis, and I still assert that the proper, scientific application of these remedies has a great deal to do with the cure of this disease.

A life in the open, regulation of the elimination and the digestion, increasing the vital resistance, correcting whichever of the functions falls into disorder, raising depressed ones and moderating those that are in excess, restoring the physiologic balance, conserving the energies, and meeting each condition as it arises, brings a degree of success far greater than can possibly follow any Procrustean method, applied to all cases without discrimination.

I do not believe we shall ever succeed in curing tuberculosis by a single blow. There will never be an easy way. But by the scientific and skilful application of known curative agencies to recognized pathologic conditions we can and do accomplish great things.



The After-Treatment of Hand-Lesions

By RALPH ST. J. PERRY, M. D., Farmington, Minnesota

EDITORIAL NOTE.—Dr. Perry's exceedingly interesting series of articles, which deals with the common lesions of the hand with which every general practitioner must be more or less familiar, will be continued next month and in succeeding issues of "Clinical Medicine."

THE after-treatment in any operation, wound or injury includes everything and anything done after the operation or first treatments and usually consists in cleansing the wounds, the application of vulnerary and antiseptic powders, ointments or washes, the covering of the site with absorbent and protective dressings, and the securing of the hand in some form of fixed dressing. Secondary operations may intervene at any time without materially modifying the routine of the after-treatment.

Upon the first treatment and dressing of the wound depends, to a great extent, the successful outcome of the case and the amount of work to be done or overseen by the surgeon.

First Steps in Dressing the Wound

If the wound be one where healing is to be expected by first intention, with very little or no discharge, the site of the injury should be freely dusted with a dry antiseptic powder, a piece of sterile gauze laid over the wound, next a small pad of absorbent cotton and then the supporting or retaining dressing.

The immediate hermetic sealing of aseptic wounds is frequently practised. The wound having been closed by subcutaneous sutures and the peritrauma cleansed and dried, iodoform collodion is painted over the surface; then, before this first coating is dry, it is covered with a few strands of absorbent cotton, to strengthen the film, and another, thicker, coat of the collodion which completely covers and buries the cotton is applied. This dressing is water- and wound-secretion-proof, germ- and infection-proof, it aids in maintaining wound coaptation and inhibits the growth of the micrococcus albus in the proliferating epithelium. If desired, any efficient antiseptic collodion or like preparation may be substituted for the iodoform collodion.

In cases where healing by granulation is expected, with an abundant discharge, the dusting with antiseptic powder is followed by a covering of gauze which has been "battered" with a sterile ointment, over this a pad of absorbent cotton or wood wool amply sufficient to absorb and retain the probable amount of discharge, and finally the supporting and protecting dressing.

This supporting, retaining and protecting dressing is an important factor in the after-treatment of all cases. It must be one which makes the hand comfortable, which does not interfere with the treatment, which does not obstruct the circulation of the blood, which protects the parts from further injury or infection, which is easily applied and removed, and which is not so conspicuous as to attract attention from the curious throng. A form of dressing which I have found most satisfactory in fulfilling these requirements is applied as follows:

Bandaging the Dressed Hand

Take a piece of clean newspaper and crumple it up into a ball about three or four inches in diameter, cover this with absorbent cotton until it is of a size to fill the palm comfortably, when the hand is in its normal relaxed condition, and over this a covering of one thickness of gauze to bind the cotton filaments together. (Figs. 1 and 2.) Place this ball in the injured hand (Fig. 3) and bind it loosely in place with a gauze bandage (Fig. 4), add another layer of absorbent cotton, which must cover the wound site completely (Fig. 5), and, lastly, cover the whole with a brown or black bandage; or an ordinary dark-blue bandanna may be tied about the hand as shown in Figures 6 to 9, the procedure being as follows:

A large dark-colored handkerchief is folded once to form a triangle, this is spread upon the surgeon's knee, hand or table, and

the dressed injured hand laid upon it so that the base of the triangle crosses the wrist; the apex is now folded over on top of the dressed hand, the two lateral corners are brought up, crossed over, passed around

in plaster of paris, as it is not so comfortable or secure as when on a broader support, and is more apt to hang down, suffer from hypostatic congestion or "go to sleep" from nerve pressure.

Use of Antiseptic Powders

Antiseptic dusting powders have for years been recognized as a necessity and the surgeon's choice lies between several which experience has demonstrated to be satisfactory. To meet all requirements, the powder must be antiseptic, nonpoisonous, nonirritating, impalpably fine, light, capable of being evenly and thinly dusted over the wound surface, sufficiently adhesive, so that it cannot be easily displaced yet will not cake with the wound secretions and can be easily washed away in changing the dressings; it should also be devoid of unpleasant odor.

The efficacy of most antiseptic powders depends upon their content of iodine, although several have been introduced con-



Fig. 1. Newspaper ball. Fig. 2. Ball covered with cotton

the wrist and tied in a knot or pinned with a safety pin. This final covering should be snug but not tight.

In cases where the patient cannot be depended upon to leave the dressings alone, to protect the hand from meddling friends, or where there is a probability of additional injury, it is best to apply a light plaster-paris bandage over the outside covering of absorbent cotton. (Fig. 10.)

In all cases the outer coverings should be regulated by the weather; they should, in the hot months, be light lest there be too free perspiration, which delays union, while in the colder months and on damp, chilly days there should be sufficient covering to keep the hand warm and comfortable; on rainy or snowy days a wrapping of thin paraffin paper will protect against the wet.

The Sling for Ambulatory Cases

In ambulatory cases the hand is to be carried in a sling or support which may consist of a stout handkerchief folded to a triangle and pinned to the coat or vest or tied around the neck (Fig. 11), the inner corner passing around the side corresponding to the injured hand and the outer corner around the opposite side; the arrangement holding the hand more securely than the reverse. The sling may be safely pinned at the elbow to prevent displacement. The hand should never be suspended on a narrow cloth or bandage (Fig. 12), even if encased



Fig. 3. The ball placed in the injured hand

taining acetanilid, boric acid, formaldehyde and other compounds without any iodine. However, the iodine-powders persist in general favor.

Among the iodine-carrying antiseptics, the most reliable, in my estimation, is iodoform with its larger percentage (96 percent) of iodine. Unfortunately, the disagreeable odor of iodoform and a prevailing notion among the laity that it is used chiefly in venereal diseases have brought it into disrepute. Many efforts have been made to deodorize it without decreasing its antiseptic and vulnerary properties, but so far with only partial suc-



Fig. 4. Newspaper ball held in place by a loose bandage

cess. In injuries of the hand where the reason for its use is quite obvious there should be no hesitation in resorting to its application should it be deemed advisable. Aristol, bismuth, formic iodide, iodosyl, iodole and many other proprietary powders are offered as substitutes, all of them efficient, devoid of unpleasant odor and not overly high-priced for private practice.

In using iodoform, caution should be exercised regarding its toxic effects and the local reaction which occasionally develops; in fact, any of the iodine-powders may cause a dermatitis around the wound, with a possible rise of temperature. Several cases of gangrene have been reported as following the use of orthoform.

In using bismuth formic iodide, the liberation of free iodine and formaldehyde during contact with the wound secretions often causes a precipitation of bismuth as a black magma, which should not be confounded with or mistaken for tissue necroses; this precipitate readily washes off leaving a clean granulating surface.

Iodosyl causes a deep-red discoloration to which the surgeon must become accustomed if he uses this powder. I have had two cases of keloid following the use of iodosyl.

The Protective Unguent

The ointment which is spread thinly upon the gauze lying over the wound, to prevent adhesions to the granulations and peritrauma, may be simple petrolatum (U. S. P.)

sterilized by repeated boilings, or the same with the addition of a small amount of an antiseptic. Petrolatum is preferable for this use because it is not quickly absorbed by the skin or granulating surface, does not itself absorb extraneous matters which might work through the protective and infect or irritate the wound, and it does not become rancid. Of course, only the purest and blandest quality should be employed.

The Absorbent Part of the Dressing

The absorbent part of the dressing is usually of cotton, although many other materials



Fig. 5. Another layer of cotton covers the wound site completely

are available. One of the best is wood-wool wadding, which has the advantage of not matting when saturated with discharges. Linen also is good. Jute and oakum are acceptable in cases where there is much dis-



Fig. 6. Ready for the application of the blue bandanna



Fig. 7. The bandanna is wrapped around the hand

charge or where the hot-water treatment is used. Some years ago a dry-earth dressing was sold on the market, which was good, but a better one can be prepared from sterilized powdered kaolin, which, if desired, can be medicated with antiseptics; it is very absorbent and readily washes off with plain water. In cases which come to the surgeon after the parts have become inflamed and congested the kaolin poultice may be applied warm without in any way prejudicing the prospects of securing good results.

Probationary Treatment

In some cases put upon probationary treatment pending reaction and awaiting nature's efforts at restoration a good form of dressing is to "embalm" the parts by applying a moist antiseptic dressing and wrapping the whole in rubber tissue or enclosing in zinc-oxide plaster strips. Leave a small opening at one end of the dressing, or at some other convenient point, through which an antiseptic and vulnerary solution can be poured upon the inner dressings to keep them moist. Thiersch's solution is satisfactory for this purpose, or equal parts of bovine and Thiersch's solution. After two or three days the rubber is removed or the plaster strips are cut, the inner dressings removed and the parts inspected. Necrosed portions are clipped away, the wound is cleansed, and redressed as conditions may indicate.

Before parting with the patient after the first treatment inquiry should be made as

to the regularity of the bowel movements, the appetite, sleep and habits in general. The bowels should move regularly; a mild purgative, repeated every other day if needed, often materially helps healing by preventing and removing the effects of autointoxication. The patient should eat regularly and of plain, nourishing food (pork being taboo), although in quantity less than when engaged in active or hard physical labor. Refreshing sleep is a necessity, and if anything should arise to interfere, the obstacle should be removed or overcome. Alco-

holic indulgence should be enjoined, while even excessive tobacco usage is to be curtailed. Other detrimental influences will be discussed in the chapter on "Conditions Influencing Results."

Every wound, regardless of its prospects, should be examined within twenty-four hours



Fig. 8. The bandanna is brought around ready for tying

of its first treatment and the dressing changed if necessary. In most wounds there will be enough discharge of serum and blood to necessitate a change, after which wound healing by first intention will require no further attention until the seventh to tenth



Fig. 9. The handkerchief is tied in place

day, when the stitches can be removed, if the sutured parts are soundly united.

In removing stitches, in order to prevent further infection, pull up on one side and cut that part of the stitch which is withdrawn from the tissues, then pull upon the stitch at the opposite side, upward and toward the wound, and it will slip out without any trouble whatever and without dragging through the tissues any of that part which has been exposed to outside infecting influences.

After removing the stitches the stitch-holes should be dusted with an antiseptic powder and the hand redressed for a few days, by which time the stitch-holes should be healed and all dressings may be discarded.

Treatment of Complications

Pain is best combated by loosening too tight dressings, by hot applications, wet or dry, as practicable; by incisions if there is tension or pent-up pus or extravasated blood; change of position or placing the parts in an elevated position (much of the pain so relieved is due to aggravated muscular tiredness); application of counterirritants; ice-bags and other cold applications; chloral hydrate or allied analgesics if other measures fail.

Most patients suffer very little pain after the first few hours following the injury unless the parts be irritated, hence absolute rest is the best preventive.

Morphine should not be given after the first hypodermics; there are other drugs just as satisfactory and not so dangerous or detrimental.

Fever frequently is seen during the early course of treatment of an injured hand, especially in those cases where phlegmon develops. As a general rule, a few doses of aconitine (with gelsemin), to control the restlessness which so frequently accompanies the fever of traumatism) or of the defervescent compound will control the pyrexia. A sponge-bath and a free bowel evacuation will materially assist in the antipyretic work.

Fever or pain arising suddenly during an uncomplicated healing are indicative of infection or irritation and call for an immediate investigation.

The *shock* which is occasionally seen in hand injuries can best be overcome by strychnine, hypodermatically at first, later by the mouth. Where shock and fever coexist the dosimetric trinity acts nicely.

Thirst is often encountered (without fever) and can safely be catered to by letting the patient frequently have small quantities—an ounce or so—of cold water (not iced), or larger quantities of hot (not warm) water less often. A piece of ice wrapped in plain gauze or thin cloth may be held in the mouth with grateful effects.



Fig. 10. Sometimes a light plaster-of-paris bandage over the dressing is best

The following case may serve to illustrate:

Case 1.—Farm-hand. While out duck-hunting he received part of a load of shot in the hand. Several days after the injury there developed an unusual thirst, with polyuria, which was alarming in its extent. Analysis of the urine showing no abnormal-



Fig. 11. This shows the right way to suspend the injured hand



Fig. 12 And this is the wrong way to suspend it

ity, a careful scrutiny of the various organs failed to disclose any cause for the polyuria, and yet the patient drank and eliminated from one to two gallons of water during twenty-four hours! The patient was a young man of untainted Scotch ancestry, physically sound in every way, not in the least nervous, hysterical or excited, and had never been guilty of such pronounced thirst or polyuria at any previous time. The case was set down as an idiosyncrasy due to the traumatism. In a few days the phenomenon subsided and the convalescence from the injury resumed the even tenor of its way to a good recovery.

Other Factors to Be Heeded

The *diet* need not be changed from the ordinary unless there is severe shock or some constitutional disturbance to derange the digestive functions, in which case the patient can be put upon a special regimen of easily digested foods. For many years I have

prohibited pork in any form in all surgical cases. Loss of appetite may be expected in many cases because of the direct effects of the surgical shock upon the system and also because of the mental apathy and melancholia which may develop in some patients who brood over their injuries or "bad luck."

Secondary Hemorrhage

Secondary hemorrhage is a possibility, if not a probability, in any surgical case and as it may occur at any time the patient as well as those attendant upon him, must be upon the constant lookout for this additional trouble. It may appear as an appreciable flow from sizable vessels or as a steady oozing from capillaries

Secondary hemorrhage may be due to a defect in a ligature; fault in tying of a ligature; a ligature may be tied too near a main artery and the current of blood rushing past prevents the formation of a plug, the hemorrhage following the absorption of the liga-

ture; athermatous conditions in the artery preventing successful ligation or torsion; sloughing of the walls of a blood-vessel involved in the general suppuration of tissues; excitement of the heart, with consequent increase in the force of the blood stream and a forcing out of plugs of clotted blood; any constitutional disease in which there is heart hypertrophy and increased arterial tension; hemophilia; some cases of pyemia and septicemia where there is imperfect blood coagulation; hypnosis from any cause; or a combination of any of these conditions may give rise to it.

The approach of secondary hemorrhage usually is insidious, although occasionally it is sudden and considerable blood may be lost before the flow can be checked. There should be no delay or temporizing in the treatment of these cases.

When first discovered, the nurse, attendant or patient should at once apply an extemporaneous tourniquet above the elbow, drawn just sufficiently tight to check the bleeding, then summon the surgeon, who may then remove the dressings, open the wound if necessary, and search for the cause of the difficulty.

If there be a defect in technic or material correct it; if due to atheroma, try hot-water compresses (either plain or medicated) or aseptic hot or styptic gelatin; elevated position of the hand. Give hemostatics internally. If a vessel-wall has suppurated, ligate, twist or compress as indicated. For vascular excitement, heart hypertrophy or increased tension, administer such internal medication as may be indicated, in addition to the local measures adopted. In cases involving a constitutional element, use active local measures first, attending to influencing the disease later, as may be demanded.

Some More Illustrative Examples

Case 2. Buzz-saw operator. Lost the distal half of the hand by having it thrown against the revolving saw. The hand was given its first treatment in the morning, half an hour after the accident, and about midnight of the same day the surgeon was called upon to attend to a secondary hemorrhage. Examination showed a gentle but steady oozing from the injured surface, which the

nurse said had first manifested itself about an hour previously. Applications of hot water to which a little ferropyrin had been added effectually checked the bleeding, and in another hour all parties concerned were again asleep.

Case 3. Chinese laundryman. In an argument with a negro over a laundry bill he received a deep cut across the ball of the thumb. Apparently the wound was made with a very sharp knife or razor, and with a view to securing primary union the parts were sutured with almost exact coaptation. Upon releasing the tourniquet there developed considerable hemorrhage, which was so persistent that the wound was reopened, in the expectation of finding a severed sizable artery, but none was found. All other local measures failing, Monsel's solution was applied, which formed a formidable clot and eliminated hopes of primary union. The wound was again closed, but about six hours later a secondary hemorrhage showed up and the whole procedure had to be gone through with again.

At this time a fellow countryman tendered the information that the patient was a "bleeder," that he always bled freely and copiously from the slightest injury. The man was given one dram of fluid extract of ergot, immediately, and every hour for two hours, then once every four hours for three doses. The wound was left open, with the Monsel's solution clot *in situ*, for twenty-four hours, at which time, there having been no recurrence of the hemorrhage, the clot was carefully washed away with warm bichloride solution and the sutures were drawn up tight and tied. Healing was secured with only a small amount of suppuration.

Secondary Hemorrhage Due to Whisky

Case 4. Railroad brakeman. An injury demanded the amputation of the index-finger and in the operation a small artery which spurted was twisted into quiescence and given no further thought. Several hours later the wound suddenly began dripping blood, and the patient being at his home, there immediately issued hurrv-up calls for the priest, police, doctor and ambulance. All of them proved useful; the good father quieted the fears of the patient and of his

family; the policeman kept the crowd from intruding; the doctor applied a temporary tourniquet; and the ambulance conveyed the entire aggregation to the surgeon's office, where the wound was opened up and the twisted arteriole found to be the offender in that it had lost its plug. The wound was cleansed, a small ligature applied to the artery, and the parts were again placed in good order for healing. No further trouble was had. The slipping of the arterial plug was caused by an increased arterial tension initiated by some spiritus frumenti, which a sympathizing friend had contributed.

Case 5. Farm-hand. The hand was caught in a corn-shredder and so severely damaged that amputation through the metacarpals was necessary. The arteries were ligated with dry catgut, and apparently

were all securely tied. Some three or four hours later the nurse noticed an unusually profuse discoloration of the outer dressings which rapidly developed into tangible evidence of a secondary hemorrhage. She applied a temporary tourniquet and summoned the surgeon, who, upon opening the wound, found that a ligature had slipped and a small artery was freely bleeding, though not profusely. The other ligatures were intact. A new ligature was placed upon the bleeding artery and no further trouble was experienced. Examination of the slipped ligature showed that while the knot had been properly tied the substance of the catgut had become so softened that the knot had apparently loosened, thus permitting it to slip off of the artery.

(To be Continued)

Vibratory Treatment in Chronic Disease

With an Illustrative Case Report

By CHARLES A. S. SIMS, M. D., Kansas City, Missouri

THAT vibratory treatment is a very essential factor in the management of most, if not all, chronic diseases, is not recognized as thoroughly as it should be by the profession at large. There are a few practitioners who know its value, and these few are the ones who are curing or greatly relieving the unfortunate chronic cases, and their number is thousands.

Mechanical vibratory treatment, in my opinion, has a wider field of application than any other single therapeutic agent. Dr. Pilgrim says that vibration—

1. Increases the volume of the blood and lymph flowing to a given area or organ;
2. Increases nutrition;
3. Improves the respiratory processes and functions;
4. Stimulates secretion;
5. Improves muscular and general metabolism and increases the production of animal heat;
6. Stimulates the excretory organs and assists the eliminative functions;
7. Softens and relieves muscular contractions;

8. Relieves engorgement and congestion;

9. Facilitates the removal (through the natural channels of the lymphatics) of tumors and of exudates and other products of inflammation; relieves vari osities and dispels eruptions;

10. Inhibits and relieves pain.

Can you conceive of any other therapeutic agent that promises so much? Certainly there is not one in the whole field of medicine.

Dr. Pilgrim has not much overreached the mark in his above brief ten statements. I have tried vibration thoroughly in the treatment of a large number of chronic cases which have come to me, and, with the possible exception of "dispelling eruptions" (with which I have not met with very much success), I am ready to sanction all of the above statements.

Why Some Fail with Vibration Apparatus

No doubt, this article will be read by some who have gone to the expense of equipping their office with a vibrator and after a brief trial have abandoned it. To those who

may have done so I wish to say, with all kindness, that they have made the greatest mistake. Their failure to get results is directly due to one or more of the following reasons: (1) A lack of knowledge of the distribution of the spinal nerves, and a lack of desire to spend the time and study that would be necessary to acquire that knowledge which is absolutely essential to success. (2) A lack of the necessary patience and the perseverance the physician must have to treat chronic diseases. Or (3) they have got hold of a worthless vibrator.

Without a working knowledge of the spinal nervous system, that wonderful electrical nervous switchboard of our body, vibratory treatment will be a failure.

If I wish to treat a patient's liver with vibration, I must know what spinal nerves supply that organ. I must vibrate the seventh, eighth and ninth dorsal posterior nerve-roots, either one or all. If the treatment calls for particular attention to the gall bladder or the duct, the seventh and eighth dorsal roots have to receive the most attention. The liver will not be benefited by treating any other spinal nerves. Should the spleen be the organ I desire to reach, I should begin the vibration at the eighth dorsal and vibrate every posterior root down to and including the first lumbar spinal nerve. Should the colon need attention, the nerve-roots treated would be the first, second, third and fourth lumbar.

While I have mentioned only a few of these points, I think enough have been cited to establish the fact that a knowledge of the distribution of the spinal nerves is essential in the successful application of the vibrator.

The fact that so many physicians have failed to get results with the vibrator and have condemned mechanical vibratory treatment with more or less disgust or distrust does not place this therapeutic agent in disrepute in the least. The latest and most improved watchmaker's tools could be put in my hands and I could not repair or put a watch into condition if my life depended on it, yet it would be folly for me to condemn the results that could be worked out with these same tools in the hands of an experienced watchmaker.

It is a fact that any organ of the body may have its function stimulated or inhibited to a very large degree. This then is a very long step forward in the treatment of chronic diseases.

In lumbago, myalgia, sciatica, pleurodynia, neurasthenia, and in any of the chronic troubles vibration works rapidly. If used in conjunction with the leucodescent ray, as I generally use it, it is prompt and effective. I have used it very effectively in gradual dilation of the sphincter ani—and by the way, a multitude of nervous conditions are dispelled every time a contracted anal sphincter is relaxed. Many cases of chronic headaches I have cured by a course of vibratory treatments, by sedating the cervical sympathetic plexus through vibration to the first four cervical nerves.

An article of this nature should, in my opinion, give one or more clinical examples, and the following is worthy of presentation.

A Case, Supposed to Be Tumor of the Kidney

Mrs. L. D. McC., age 31, who lives in a small Kansas town about ninety miles from this city, presented herself at my office on February 24, 1908, for consultation. She had been in very poor health for eighteen months previous, and for the past five months had suffered great pain in the abdominal region, and also had severe hematuria. The blood in the urine was generally discharged in small clots, but on one or two occasions it was voided in a fluid state and in such quantities that it coagulated in the bottom of the vessel. Every seven to ten days she had an attack of what her physician termed "kidney colic." These symptoms and seizures took on such a serious aspect that the woman was expected to die at any one of these occasions.

Her physician had diagnosed her case as nephrolithiasis, and had told her that he could do nothing for her relief and sent her to this city with letters of introduction, accompanied by her aunt, who was a professional nurse, to two of the leading surgeons. These surgeons upon examination did not confirm the diagnosis of the home doctor; instead, they decided there was a tumor growth in the left kidney, necessitating the excision of that organ. They informed the

lady that she could live but a few weeks unless she submitted to the operation. This she refused, and so the surgeons advised her to go back home and await the end, which they assured her was only a few weeks distant.

At this stage of her case the lady chanced to meet a former patient of mine, who urged her to be sure to see me; that I was "one of those doctors that did not believe in cutting." Right here I wish to state that I am in favor of operations, but only as a last resort.

When Mrs. McC. called at my office, she brought, for my inspection, the uranalysis report, and this I carefully looked over. I examined her closely, including a carefully conducted examination of the spine. I found tender points at all of the notches sending out posterior roots of the spinal nerves that supply the liver, spleen and kidneys. Her liver was greatly engorged, the spleen enlarged, and the left kidney was so much swollen that it made a perceptible bulging under the skin of the back over it. Her skin was quite icteric and flabby, as she was forty-one pounds under her normal weight. She had no desire to eat and could not sleep.

I realized that I had on hand a very grave case, and the conclusion arrived at was that the liver was the cause of her condition, the appearance of the blood in the urine being due solely to the impeded, dammed-up condition of the portal and splenic circulation, since the uranalysis did not show either tubercle bacilli or suggest the presence of cancer.

The Technic Employed and the Drugs Used

I placed her upon mechanical vibratory treatment to the posterior spinal nerve-roots supplying the liver, spleen and kidneys, and also vibrated the region directly over these organs.

Internal treatment was started with one granule of calomel, gr. 1-6, and one granule of podophyllin, gr. 1-6, every hour for six doses, followed one hour after the last dose by two heaping teaspoonfuls of effervescent saline laxative in a full glass of hot water. This gave three actions from the bowels but with very little bile. I ordered boldine granules, gr. 1-67, two granules three times

a day, increasing one granule every day until six granules were taken at a dose. Then the dose was to be lessened one granule a day until she was back to the original dose of two granules three times a day; then she increased the dose one granule a day, as was done before, until the six were taken at each dose, and then again reduced down to two at a dose, as was previously done. On this dosage she was kept for three months. Once a week for three weeks I ordered calomel and podophyllin as above mentioned.

During the first week I ordered 5-grain doses of urotropin, dissolved in a glass of drinking water, three times a day, to clean out the kidneys.

I gave her daily treatments with the vibrator for six consecutive days, then missed one day, and then a treatment each day for five more days, then every other day until she had been under treatment for four weeks. I then let her go home and remain four weeks, when she returned and received a treatment every other day for two weeks. She then was discharged cured.

Now listen to the results. Urine perfectly free from blood after the eleventh treatment; not one attack of the old "kidney colic" while under my care; all pain and tenderness gone over region of liver, spleen and left kidney; left kidney reduced to normal size; complexion normal; appetite splendid and digestion good; sleeping well; gain of ten pounds in weight during first four weeks of treatment. But better than all these, when the lady was discharged cured, she said to me just before leaving my office to go home: "Doctor, I feel better than I have felt for the last ten years. You not only saved my life, but I am going home with both of my kidneys instead of leaving one here in this city with those surgeons, as they suggested."

Boldine Contributed to the Cure

This is a very accurate report of this case. Of course, boldine had its part in restoring the hepatic functions, yet without the vibratory treatment the patient would certainly have died. She has sent me, since April, 1908, an even dozen patients, all of whom I have either cured or relieved to their satisfaction.

I last heard from Mrs. McC. through a patient she sent me about the 20th of last September. This lady reported that Mrs. McC. was in the best of health and weighed 165 pounds, which is 61 pounds more than she weighed when she applied to me for treatment.

I have splendid results with vibratory treatment in muscular contractures, brachialgia, sciatica, neurasthenia, and in all the cases where the metabolic processes are at fault.

It pays the doctor to look into the cases of these poor chronics who have been buffet-

ted about from one doctor to another without getting any benefit. My advice is to equip your office with mechanical therapeutic appliances, then inform yourself on their uses, stay with your patients, and cure or relieve them. I know that it requires some study and then each treatment takes more or less time, but it pays. The treatment of chronic troubles is the largest field that is open to the doctor and if you do not fit yourself to take care of them your near neighbor, who is a bit more energetic than you are, will care for them and you are the loser in the game.

Quinine Hydroferrocyanide, and Helenin

How They Were Used in a Third-Stage Case of Phthisis

By DR. ALBERT SALIVAS, Paris, France

Translated by W. T. Thackeray, M. D., from "*La Revue Dosimetrique*"

THERE are two medicines that receive but little attention from the schools of medicine but which, nevertheless, are susceptible of rendering great service to us in a number of circumstances. I refer to the hydroferrocyanide of quinine and to helenin.

In my article in the April number of *Revue Dosimetrique* [See this journal, Oct., 1910, p. 1187] I called the attention of my brother practitioners to the value of hydroferrocyanide of quinine in tuberculous hemoptysis. This efficacy was more particularly emphasized by Dr. Lannois, and his remarks were added in connection with the statement of results obtained by myself with this agent, in divers cases of pulmonary hemoptysis.

Acting upon the hint given by the happy results attending the use of the hydroferrocyanide of quinine in cases of hemoptysis which had been my despair, I conceived the idea of utilizing this preparation for combating the evening fever of tuberculosis. But the effects obtained were not so encouraging as those from the use of other salts of quinine, in conjunction with the dosimetric trinity.

Pending the acquirement of further experience, I can say that, if the hydroferrocyanide of quinine has but little influence

upon the fever of tuberculosis, it has, in compensation, an incontestible calming effect upon the cough. The clinical work that I have seen absolutely justifies this statement as well as the assertions of Dr. Van Renterghem upon this point. One of the most striking examples that I have had is that of a little girl of eight years, both of whose lungs were greatly affected, but the left one the most. The cough was painful and incessant and slightly relieved by codeine; but not obtaining all of the benefit anticipated, I added the hydroferrocyanide of quinine.

While holding my conclusions partly in abeyance, I have today completed the observations which I had in view in the article published in April.

The little patient who furnishes the data for these observations became consumptive as a sequel to an attack of scarlet-fever which she experienced when two years of age, and it may be noted that there is no family antecedent which explains the infection.

When I saw the child the first time she had some fever. She had been examined and given up as hopeless by five physicians, and her condition was certainly very grave.

The right lung presented a vast cavity and the mucous râles extended over the

whole lung. She had an excessively abundant expectoration, often of a greenish color. She suffered also from severe night sweats and a marked evening fever. This fever was persistent, commencing at about three o'clock in the afternoon and continuing until one or two o'clock in the morning, with a temperature of about 104° F.

On numerous occasions they had tried to cut short the fever by means of the salts of quinine or by antipyrin, but it was labor lost. When I, in my turn, was consulted, I substituted for the two foregoing medicines the dosimetric trinity. This did some little good, but not as much as I had hoped. The patient received, every day, the most scrupulous care according to the rules of dosimetric (alkaloidal) teaching. To the dosimetric trinity I then added the hydroferrocyanide of quinine, which was continued during a fortnight. There appeared to be no relief of the fever but the cough was very much relieved.

The continued use of the hydroferrocyanide of quinine in combination with the dosimetric trinity rendered the fever a little less marked. And this proved its real action, that is, the fever was increased by the interruption of the administration of the hydroferrocyanide of quinine while the dosimetric trinity continued, and it immediately declined upon again resuming the hydroferrocyanide. In this case this agent was used in doses of 5 to 8 centigrams per day, and it certainly showed itself to be, in the end, an antipyretic and at the same time a tonic and reconstituent of the blood. I had the pleasure of verifying its favorable action and I could see no reason for changing my mind during the two or three weeks that it was under observation.

I come next to the good effects which were obtained in our little patient from helenin prescribed systematically during three months.

Helenin, or elecampane camphor, belongs to the amylaceous hydrocarbons. It exerts a happy influence upon the secretions of the respiratory and digestive tracts. It disinflects the bronchi and liquefies the phlegm, thus facilitating its expulsion. It corrects the putrescence in the stomach and intestines and also promotes the secretion of the gastric juices and improves appetite.

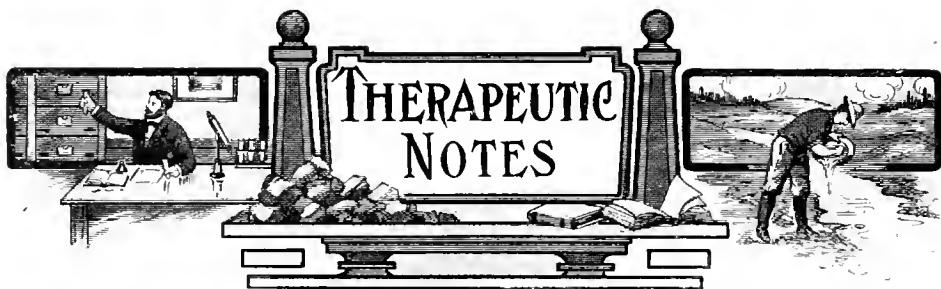
In Germany helenin is considerably employed in the treatment of tuberculosis, some physicians considering it as a specific in this disease. But these evidently do not understand what a specific is! Indeed, can we have a specific against tuberculosis? However, the dosimetrists (alkaloidists) do, frequently, use this agent in the treatment of phthisis. Our dear and regretted confrère, Dr. Ferran of Lyon, recognized it as the bacillicide of choice.

In the case of the young girl patient referred to, the helenin played a very important part. Faithfully and regularly, during three months, she had a daily dose of 6 milligrams; and this modified, little by little, the expectoration, both as to its quantity and its character. Today the expectoration is much less abundant; it is frothy, aerated, and contains but little pus. Once we omitted the helenin during twenty-four hours and, as a result, the expectoration showed a tendency to reassume its former vicious character.

It is unnecessary to say anything more either about the helenin or the hydroferrocyanide of quinine. I will state, that I have had recourse to codeine for relieving cough and to brucine as a general tonic.

It is true that in spite of my efforts the little girl is beyond help. The disease is strongly implanted in her and it has already made great ravages in her lungs, and we can not delude ourselves in this regard; and while I have been able to ameliorate her suffering appreciably, I cannot prevent the final denouement. This amelioration of symptoms is due to the simultaneous use of helenin and hydroferrocyanide of quinine, the value of both of which is well proved.

As to the rest, notably as concerns the helenin, I have had frequent occasion to confirm these observations clinically other than the foregoing, where it played the part assigned to it by physiology. Consequently, it can be of great value to us in the treatment of pulmonary affections. Helenin is preferable to other drugs, as it never disturbs the stomach, rather the contrary, and consequently it responds marvelously to the wish of Prof. Peter, that "we should piously guard the stomach, which is the stronghold of the tuberculous." I believe, that helenin is preferable to calcium sulphide for consumptives.



ACONITE POISONING

In the *Lancet*, October 29, Edgecombe describes a case of poisoning by aconite. The patient took by mistake a tablespoonful of a liniment containing aconite, belladonna, chloroform, capsicum and oil of gaultheria, containing forty minims each of aconite, belladonna and chloroform liniments, and tincture of capsicum, with double this quantity of oil of gaultheria. The symptoms indicated that the aconite was the poisonous ingredient, since the belladonna failed to dilate the pupils. The dose probably contained about 1-8 grain of aconitine, or thirty-one times the maximum dose. The belladonna must have been inert. The treatment consisted of lavage, strychnine hypodermically, and coffee by the rectum with the external application of heat. The patient commenced to rally one hour after treatment was commenced. In this case the weakness of the chemist's remedy was responsible for saving the patient's life.

PHAGOCYTOSIS FOLLOWING QUININE AND MORPHINE

Smith (*Lancet*) experimenting with quinine and morphine, found a decided increase of phagocytosis follow the application of these alkaloids. This is directly contradictory to the common belief; but when the doses of quinine were increased to 30 grains, phagocytosis was diminished. Smith attributed the result to the alkaloids acting as opsonins to certain microbes. These results did not hold with tubercle bacilli, but did with streptococci, bacillus coli, pneumococci, bacillus influenzae, and a pseudodiphtheria bacillus. The administration of quinine in

the dose of a grain for each stone (14 pounds) of the patient's weight seems likely to strengthen the natural first line of defense, especially in the initial stages of a bacterial invasion when the invaders are few.

CALOMEL AND GASTRIC JUICE

Although the assertion that calomel in the intestinal tract, in the presence of the gastric juice or of acids, is partly converted into corrosive sublimate, has often been controverted, it bobs up again and again like the proverbial bad penny and scares a few diffident physicians into doing without this valuable remedy.

Dr. Th. Schaefer (see the *Deutsch-Amer. Apotheker Zeit.*, Sept., 1910) has recently published a report of careful experiments on dogs, from which it appears that corrosive sublimate is not formed during the disintegration of calomel, that this is harmless in the presence of gastric juice, chlorides or vegetable acids, and may, therefore, be administered without fear of any harm following.

DELAYED CHLOROFORM POISONING

In the *Lancet*, October 29, Dr. Telford contributes some interesting notes on delayed chloroform poisoning. In his first case, thirty-six hours after the operation vomiting commenced, and continued without intermission until death. The liver proved to be in a state of fatty degeneration, as were also both kidneys. No other signs were found at the post mortem.

In the second case, that of a child 5 1-2 years of age, an operation was performed under ether for the radical cure of hernia.

The drug was given with an Allis inhaler after preliminary induction of anesthesia by three cubic centimeters of ethyl chloride. The total duration of anesthesia was twenty minutes, and two ounces of ether were used. Thirty-six hours after the operation the boy was noted to be stupid and drowsy. Vomiting then began and continued for thirty hours, but finally subsided, the boy recovering. The urine contained acetone. Inquiry showed that the boy had been subject to such attacks previously.

A review of the literature of delayed anesthetic poisoning shows that a vast majority of these cases occur after chloroform, few after ether. Acetonemia develops and is the cause of death.

ATROPINE IN SPASTIC CONSTIPATION

In spastic constipation (Merck's "Annual Report," 1908, XXII, p. 144), systematic treatment with atropine is said by F. Kisch to be of good service. Two hours after breakfast, and three or four hours after the principal meal, 0.0005 Gram (gr. 1-120) of atropine sulphate is given by mouth; or, if spasm of the sphincter be present also, 0.05 Gram (gr. 5-6) of extract of belladonna is used in the form of a suppository, two or three times a day. This treatment is continued until a regular painless evacuation has continued to occur daily for at least ten days.

SODIUM NUCLEINATE INCREASES RESISTANCE TO INTOXICATION

J. E. Abelous and E. Bardier (*Comptes Rendus, Soc. de Biologie*, 1910, p. 43) injected various animals with doses of 0.05 Gram of sodium nucleinate for several days before injections of urohypotensin, with the result that the animals so treated were resistant against the intoxication, while the controls which had not been treated succumbed to the urohypotensin.

The authors conclude that the administration of sodium nucleinate in animals creates in them a manifestly increased resistance to intoxication by urohypotensin. This protective action, in all probability, is due to the leukocytosis which follows upon the injections.

It is, however, possible that this leukocytosis is not the only factor, and that with it is combined a direct antitoxic effect on the part of the sodium nucleinate, as some of our experiments lead us to think.

MAGNESIA DRESSING FOR SEVERE BURNS

Dr. Ohleyer reports (*Arztliche Rundsch.*) upon a case of a burn of the third degree which was healed in a short time by magnesia dressings. His method was as follows:

Twice daily, morning and evening, the wound was covered fairly thickly with magnesium carbonate, and over this a double layer of gauze, upon which a layer of absorbent cotton was secured by means of a bandage, was applied with moderate pressure. On redressing, the portions of the dressing which adhered to the wounds were carefully removed with pads of absorbent cotton dipped in a 1 : 1000 solution of lysol.

The author attributes the favorable result to the alkaline properties of the magnesia, which absorbs and neutralizes the acid of the muscle juices, and deprives the pus of its destructive action upon the skin.

GLYCERIN INEBRIETY

The Journal of Inebriety (1910, p. 27), mentions glycerin tipping as one of the new addictions never mentioned before. Dr. Schmey of Berlin reports such a case, where a young man drank from twenty to thirty ounces of glycerin every day. This had been going on for many months and began with the idea that it was of particular value as a nerve tonic.

The victim claimed to experience great exhilaration after its ingestion, comparing it with alcohol, only more pleasing in its effects. A few hours afterward the exhilaration turned to depression, and he had to lie down and sleep. He had become very irritable, was pale and jaundiced, his appetite declined, and he was erratic in his work and ideas. His thirst for glycerin was very intense, and he refused to abstain, seeking every means possible to procure the stuff. The liver was found to be enlarged, and the heart somewhat feeble, but beyond general

anemia, there was little to mark him as an addict. He took no medicines and seemed to be functionally in a fair degree of health.

This evidently is one of those anomalous cases where the victim is likely to turn from one addiction to another from the slightest exciting cause. It should be remembered that, chemically, glycerin is an "alcohol."

SPINAL ANESTHESIA

When Dr. W. Wayne Babcock read before the American Therapeutic Society his paper giving statistics of two thousand administrations of spinal anesthetics, some exceedingly important points were brought out in the discussion. Dr. Barton asked whether the 10-percent alcohol added would not induce nerve degeneration, but Babcock replied that while this had been carefully looked for none had been found. Such degeneration as had been found during the last five years had invariably occurred in patients who had been previously etherized. Jonnesco's doses were unnecessarily large. Out of two thousand cases, there were only from six to ten in which it was necessary to employ artificial respiration.

CALCIUM LACTATE IN UTERINE HEMORRHAGE AND RHINORRHEA

Ausems recommends (noticed in *Wien. Med. Woch.*, 1910, col. 1900) the use of calcium lactate in uterine hemorrhages, in daily doses of 3 Grams (45 grains). He found that this drug, when given for several days or weeks before confinement, had the effect that the loss of blood during delivery was very slight. In cases of abortion, the administration of the calcium salt failed. The author cites the case of a girl, thirteen years old, who suffered from severe hemorrhages and in whom all other means had failed. Three days' treatment with calcium lactate produced prompt cessation of the hemorrhage.

This is an interesting observation and one well worthy of further investigation, although we should be inclined to substitute the lactophosphate for the lactate of calcium. Lime salts have long been considered efficient remedies in various affections, and today are

recommended, especially in scrofulous and other glandular diseases, in tuberculosis, etc.

Recently *The British Medical Journal* contained a communication on the effectiveness of calcium chloride in the very annoying and obstinate condition of rhinorrhea. *The Chicago Medical Times* (1910, p. 168) says: "Calcium lactophosphate is the remedy to upbuild weak cells; in hemorrhages, scrofula, etc. Give one dram a day, in divided doses, for a month or until vertigo shows saturation. But then quit, or you may have apoplexy."

SALT ENEMAS IN TYPHOID FEVER

Enemata of physiologic salt solution have been employed in typhoid fever with good results by Riesmann (noticed in *Wien. Med. Woch.*, 1910, col. 2071). He injects daily from two to four quarts, and has observed an increased diuresis, improvement of the nervous symptoms, and, evidently, increased elimination of the toxins. In the course of two years, since the author has employed this treatment, he has not lost a single patient although in some of his cases the disease ran a very severe course.

ALCOHOL DRESSINGS

Dr. Kohler recommends, in *Therapie der Gegenwart* (1910, No. 8), for phlegmon, furunculosis, erysipelas, gout, arthritis, neuralgia, herpes zoster, etc., the use of dressings with gauze dipped in 70- to 90-percent alcohol, the gauze being folded eight or ten times and covered with waterproof tissue.

THE SPHACELOTOXIN IN HYDRO-ERGOTININE

Horatio C. Wood, Jr., and Clarence A. Hofer, publish, in *The Archives for Internal Medicine* (1910, No. 4), the results of their researches on the pharmacology of ergot, the important facts brought out by them being summarized by the authors as follows:

(1) Ergot is a stimulant to all the unstriated muscle-tissue of the body. (2) As a part of this general action there is a stimulant effect on the arterial muscles and probably

also on the heart. (3) The action on the blood-vessels occurs after destruction of the vasomotor center and, therefore, must be the result of an effect on some portion of the peripheral vasomotor mechanism. (4) The degree of elevation of blood pressure affords an accurate criterion of the activity of ergot and is, in our opinion, the most available method for the biological assay of the drug. (5) The active principle of ergot is an alkaloidal substance which occurs in the drug, probably in chemical union with a resinous body. For the combination we suggest the retention of the name suggested by Jacobi, sphacelotoxin, and for the alkaloidal substance the term applied by Kraft, hydroergotinine. (6) The percentage of sphacelotoxin varies accurately with the physiological activity of different specimens of ergot. (7) The percentage of sphacelotoxin in a fluid extract may be easily estimated by precipitating with water and extracting with benzol. (8) The deterioration of fluid extract of ergot may be much retarded by protecting it against contact with the air, but under the most favorable conditions there is a loss of strength approximating 10 per cent a month.

ATROPINE IN GASTRIC ULCER

The results of D. von Tabora, cited in Merck's "Annual Report" for 1908, evidently prove that atropine is a valuable auxiliary remedy in the treatment of gastric ulcer, under certain circumstances, when used systematically. The property of atropine of reducing the secretion of hydrochloric acid, and its antispasmodic and narcotic action suggest themselves from theoretical considerations. Tabora prescribed special diet and rest in bed, and gave his patients an injection of 0.001 Gram (gr. 1-67) of atropine sulphate two to three times a day for four to ten weeks.

This treatment was always well tolerated, and resulted in the subjective troubles (especially the pain) remaining absent from the first days. The hypersecretion disappeared entirely in certain cases, and diminished considerably in all. The motor functions of the stomach improved as well, and pyloric contractions observed before the treatment

were no longer noticeable. The value of the atropine method depends, in the author's opinion, principally upon the rest thus given to the stomach, a rest which cannot be obtained in the same degree by any other therapeutic treatment.

The atropine treatment is suitable, therefore, for cases which are refractory to the usual methods and where operation gives no certain prospect of improvement. The result often is just as good as that of a successful surgical procedure; less benefit is to be expected from it, however, in cases of severe motor insufficiency due to cicatricial constriction of the pylorus.

THYROID EXTRACT AND CORPUS LUTEUM IN BRONCHIAL ASTHMA

Levi and Rothschild (*Bull. Med.*, 1910, p. 454) have given thyroid extract in six cases of bronchial asthma, with good and lasting results. The thyroid extract is best given in doses of 0.1 Gram (grs. 1 1-2). In other cases of asthma they saw improvement after the administration of corpus luteum.

A ROUTINE FOR THE TREATMENT OF ARTHRITIS DEFORMANS

Dr. Clarence E. Skinner (*Amer. Jour. Med. Sciences*, Nov., 1910) observes the following routine in the treatment of his cases of arthritis deformans, of course modifying it to suit the individual peculiarity in the various phases of the disease and the variations in the patient's condition:

(1) Rest in bed for at least ten hours out of the twenty-four. (2) A diet as generous as can be digested and assimilated by the individual patient, without producing putrefaction or fermentation. (3) From 1-40 to 1-30 grain of strychnine sulphate, and 2 or 3 grains of ferrous iodide, three times daily half an hour before meals; and for emaciated patients, from 1 to 4 drams of codliver oil after meals. (4) A dose of some one of the various mineral waters before breakfast, every two or three days, if constipation is present. (5) A body dry hot-air treatment two or three times weekly. (6) Central galvanization once or twice weekly. (7) A general application of mechanical

vibratory stimulation two or three times weekly. (8) A static electric application at least once every day, consisting, in acute cases, of the Morton-wave current over the affected joints or spine, and in the chronic cases, of long, thick sparks to the affected joints one day, and the Morton-wave current localized over these joints the next. In some cases one of the high-frequency currents, applied either locally or generally, may advantageously replace some of these static applications, or be added to them. (9) A hot and cold douche to the spine two or three times daily.

DRUGS USEFUL IN ARTHRITIS DEFORMANS

While a long list of remedies has been recommended, Dr. Skinner finds that the iodide of iron gives the best results. This should be given for periods of six weeks, with intermissions of two or three weeks, and may well be associated with codliver oil. He finds arsenic and strychnine useful in many instances. [Strychnine arsenate should be, on theoretical grounds, an ideal agent.] Skinner says that chloride of gold and sodium or potassium iodide or hydriodic acid sometimes seem to render considerable service. Thyroid extract is found of considerable benefit, especially in cases where this organ is atrophied and the vasomotor phenomena peculiar to the disease are prominent. Salicylates are particularly valuable because of the relief which they give to the pain and swelling. Constipation, when present, demands attention, and proper laxatives should be administered, selecting the one found most helpful. Digestants and antifermentatives may be, and usually are, required. [The alkaloidal practitioner will naturally think of the daily morning saline purge and the sulphocarbolates.] As Skinner says:

"Absorption of putrefactive toxins from the intestine is held by some observers to be the dominant etiologic factor in this disease, and no one disputes the fact that such absorption is depressing in this or any other condition. The prevention of intestinal putrefaction, then, is desirable, and this can best be accomplished by temporarily exclud-

ing from the diet those food-stuffs in which putrefactive bacteria are most active. These are meat, poultry and fish. When these are excluded, however, care must be taken to see that sufficient protein material is supplied by other foods, and milk, eggs, nuts and gelatin usually take the place of flesh very satisfactorily so far as the nutritional needs of the body are concerned."

RELIEF OF PAIN IN ARTHRITIS DEFORMANS

Dr. C. E. Skinner, whose article in *The American Journal of the Medical Sciences* we have already quoted, suggests the following expedients for the relief of the distressing pains in this disease:

The various electrical modalities are quite often found useful; also dry hot air, electric lights locally applied, the hot-water bag, and hot fomentations. In some cases cold applications give more relief than the warm ones.

Of drugs to be used locally, he recommends "baume analgesique, Bengue," the familiar chloral, camphor and aconite mixture, and the tincture of iodine.

If all these measures fail, resort must be had to drugs. He avoids opium and its derivatives and the coal-tar preparations, but has used the salicylates and pyramidon with considerable satisfaction. He finds tinctures of hyoscyamus and gelsemium helpful, especially if the pain is particularly in the nerve-trunks. If there is muscular spasm or cramp occurring during sleep, these, with strontium bromide in 20- or 30-grain doses repeated hourly until the condition is relieved or until three doses have been taken, usually give good results.

Instead of the tinctures and the bromide used by Dr. Skinner we should recommend the use of hyoscyamine (or atropine), gelseminine and cicutine. The atropine and gelseminine are more powerfully sedative than the corresponding galenics recommended, while the cicutine is much less toxic than the bromide combinations in the large doses usually given.

Dr. Skinner says that bandaging the affected muscles snugly at night will sometimes prevent spasm.



The Tolerific Property of Strychnine

TOLERANCE denotes that state of the economy in which the medicaments administered do not show any of their very palpable and very constant effects, while at the same time they preserve their efficacious therapeutic action. In other words, those substances are "tolerific" which, given together with other substances whose effects are injurious, render the latter harmless and moreover make the patient capable of supporting his state without danger or inconvenience. It is by this that "tolerific" substances are distinguished from "correctives," or from "incompatibles" and "antagonists."

Correctives have for their object to mask or to moderate the local remedial action of the substances with which they are combined, and they are also classified with agents that have a contrary action, as for instance the mucilage which is added to a styptic collyrium.

Incompatible substances are those which destroy the action of an agent with which they combine chemically; e. g., tannin destroying the solubility of iron salts by combining with them.

Finally, antagonistic substances are those which oppose the general toxic products of the one by the contrary physiological action of the other; for instance, the administration of chloroform combating the tetanic symptoms produced by strychnine.

Differing from this is the result obtained when we add opium to mercurial combinations, where the object is to make the economy tolerant of the medicament; in this way its administration can be prolonged without injury to the economy, which profits thera-

peutically. With the opium in this combination it is not intended to moderate the action of the mercury in any way nor to produce a less absorbable combination, nor in any way to hinder its general toxic effects. The only object is to prevent the purgative effects of the mercury, which depress the strength of the patient, and to avoid which we would have to suspend the mercury for a time, and so interrupt the benefit of the treatment, and interfere with its desired effect. Opium in this case has the property of rendering the medicament supportable, i. e., of suppressing one of the physiologic effects of mercury without, however, sacrificing any of its therapeutic effects.

It is this property which should be designated as tolerific.

It is unnecessary to dilate upon the advantages which the substances mentioned present in dosimetric treatment. The therapeutic principles urged by the illustrious founder of dosimetry demand that our remedies so act upon the patient that he shall utilize every dose given him, so that they can be repeated till the desired therapeutic effect is obtained. But it frequently happens that the physiologic effects of an agent exceed their therapeutic effects, in which case we have to suspend a useful jugulating medication because of some special susceptibility or idiosyncrasy of the patient. Now this would happen very frequently if we had not strychnine, in which we recognize this so important tolerific property to which we call the attention of our professional brethren.

There are four medicaments of which dosimetry makes the most frequent use and which render us most valuable service every day.

These are strychnine, aconitine, veratrine and hyoscyamine. Clinical observation has demonstrated to us that the last three, aconitine, veratrine and hyoscyamine, have the first property (their physiologic effects exceed their therapeutic effects) and that the first one, strychnine, exercises that advantageous tolerific property.

Aconitine and veratrine enable us to jugulate acute febrile diseases and hyoscyamine enables us to combat the innumerable spasmodic diseases. From these facts, the importance of being able to continue these remedies "till effect" will be easily seen. We have, however, remarked that in some cases, especially those of infants, the defervescent remedies provoke vomiting after the first dose, so that the remedies do not act antipyretically but as emetics, and so exhaust the strength of the patient to no useful purpose. Similarly, we meet conditions in treating spasmodic diseases with hyoscyamine, especially in aged persons, where hyoscyamine may provoke visual disturbances—also mental ones—so that we are obliged to suspend the remedy before the spasms are subdued.

What is to be done in such an event? Are we to fold our arms and allow the fever to localize itself and form some lesion and permit the disease to consume the strength of the patient, till he perishes? No! This would be a sad disappointment and a deplorable situation for those of us who are accustomed to save living beings whose vital powers are rapidly failing. Here strychnine, that veritable panacea of modern times, without which there could be no real practice of medicine, comes to our aid. Strychnine, that wonderful equilibrating agent, given in conjunction with the defervescent, will reestablish the necessary equipoise by which these so indispensable medicaments for jugulating fever become tolerated.

Strychnine administered with hyoscyamine allows us the insistent administration of the latter till the desired effect is produced without being hindered by any untoward side-effects. The facts which demonstrate the efficacy of strychnine in removing the intolerance of the organism against the above alkaloids are very numerous, but the attention of those who used them was not drawn

to the fact till now. *The Répertoire Universel de Médecine Dosimétrique* and the *Revue* are full of demonstrative notices.

No doubt that the intelligent minds of dosimetrists were surprised at the tolerance of patients, especially infants, to doses of the alkaloids which by all pharmacologists are considered very toxic. If they were but to read the observations reported they could confirm them, that aconitine, veratrine and hyoscyamine have been given in combination with strychnine for the purpose of meeting a fundamental indication of disease, asthenia.

Some days ago we had occasion to witness the importance of the action which we attribute to strychnine.

The case was that of an infant eight years old. The day preceding the child was taken sick with violent chills, a pain in the side, intense fever and severe headache. At the time of our visit the thermometer showed 39.5° (103.5° F.). The tongue was dry and gray, the conjunctivæ injected, the pulse full and quick (130 per minute), the skin dry and rough. The violent efforts at inspiration showed that the disease had located itself in the lungs. The pain in the side was aggravated by intense dyspnea, making the patient cry out every moment. Percussion showed dulness over all the anterior of the chest and on both sides. Auscultation was impossible on account of the patient's crying out.

We diagnosed a double pneumonia, made a very reserved prognosis and prescribed a thapsia plaster over the seat of the pain and a granule of aconitine every two hours. The intervals were made thus large to avoid an intolerance, which manifested itself in the mucosæ of the *primæ viæ*. Next day we were told that every granule given produced vomiting, so that no more than three granules were given the first day, and two the next. The condition of the patient remained almost the same, except there were more complaints of the cough and two reddish expectorations. We ordered the aconitine continued every two hours and added to it a granule of strychnine sulphate.

After this time the patient tolerated the medicament perfectly and there was no more vomiting. Next day the patient felt

much more calm, the chest became more resonant, the pulse came down to one hundred and the temperature to 35.5° (101.2° F.). Twenty-four hours after that the patient entered upon his convalescence which progressed as rapidly as the access of the disease did before.

It is evident that apart from the help which in this case the strychnine added to the defervescent medication in the subsidence of the inflammation the strychnine had also influenced the *primæ viæ* to tolerate the medicament which was at first resisted. These facts speak for themselves eloquently, and with respect to the hyoscyamine as well.

The susceptibility of aged patients, especially females, to the continuous physiological action of hyoscyamine, is well known. Some of my confrères have frequently observed to me that two or three granules of hyoscyamine given daily would produce visual troubles in the aged, which manifest the beginning of toxic effects. Very well. We have treated an aged female of seventy years for some five days, who presented all the symptoms of ileus. We prescribed for the enteralgia a granule of hyoscyamine and one of strychnine, together, every half hour, to be continued "till effect." She took six doses consecutively and very regularly. The pains were calmed, the movements of the intestinal contents were reestablished, the vomiting ceased, and yet she complained of no disorder which might have been attributed to the hyoscyamine.

Would it have been possible to push the medication of hyoscyamine up to a sufficient saturation of the organism, and could we in the same way have caused the nervous irritability to disappear without producing a new artificial disease if we had not had strychnine by which to reestablish the equilibrium of the organic forces? We think not. To try to explain these facts would be to offer some valueless hypothesis, and it is better to abide by the clinical facts as sufficient.

We cannot, however, leave unanswered a certain objection, which will serve at the same time to explain the tolerific property of strychnine.

It might be supposed that if the alkaloids are best supported when given together with

strychnine it is so because they mutually decompose and neutralize one another. But were it so then we could never obtain their therapeutic effects, and in so doing utilize their physiologic effects. Thus, in the case of that pneumonia the fever would not have ceased, and in the case of that ileus the spasms would have continued.

We conclude therefore from the above:

First, that strychnine besides its generally recognized excitomotor power possesses also the property of destroying the body's intolerance to certain medicaments which are therapeutically indispensable and which could not be replaced, an intolerance which is produced in certain patients, whether as an idiosyncrasy or as a peculiar quality of some disease or lastly because of the necessary continuance of the administration of the medicament.

Second, that this tolerific property of strychnine neither annuls nor modifies the therapeutic properties of the substances which constitute the principal parts of the medication.—CASTRO, in the *Repertoire Universel De Médecine Dosimétrique*, Vol. X, p. 145-8.

POISONING WITH MEAT PRESERVED ON ICE

H. Conradi says that inside of ice blocks there are viable paratyphoid bacilli which continue to live and be virulent for months. The possibility, therefore, of infection by means of food preserved on ice is given and deserves earnest attention. When the bacteria come in contact with articles of food and with the melted ice water for a length of time they proliferate. There are, says the author, other means of infecting sausage with paratyphoid bacilli by means of ice. For instance when in making sausage the meat pulp gets ice mixed into it as a binding material, if natural ice is used and not ice made of distilled water, the possibility of infection is present and this may explain the origin of poisoning with sausages. Conradi therefore proposes to forbid the use of natural ice in this part of sausage-making. (*Muench. Med. Wochenschrift*, 1909, 18.)

Rommeler in the *Deutsche Med. Wochenschrift*, 1909, 20, writes on the same theme

of infection, about "the paratyphoid bacilli in the ice used for packing sea fish." Rommeler saw five members of a family who showed all the typical symptoms of fish poisoning after fish eating and in whose feces he found paratyphoid bacilli. He then examined the ice used in packing the sea fish, that came from Bremerhaven and Geestmünde, and in 98 samples taken from the fish-packing ice of twelve different consignments paratyphoid bacilli were found four times. He thinks, therefore, that the manner of preserving sea-fish should be improved. The natural ice which is used in sea-fish packing should be obtained from places that are free from any objections on account of the suspicion of infection.—*Deutsche Med. Wochenschrift*, 1909, 20, cited by the *Pharmazeutische Zentralhalle*, 1910, p. 412.

TO PRESERVE HYDROGEN-PEROXIDE SOLUTION

To preserve the virtues of hydrogen peroxide solution it is better, according to E. Merck (See *Pharmaz. Zentralhalle*, p. 569, 1910) to add instead of uric acid the far more soluble barbituric acid of which a fraction of a percent is sufficient for the purpose.

Our chemist, Mr. Summers, says that barbituric acid is made by the interaction of one molecule of urea and one molecule of diethylmalonic acid. It is diethylmalonurea.

THE EFFECT OF WATER UPON CONDUCTING PIPES, ESPECIALLY THOSE OF LEAD

This subject was investigated closely by Klut, who states his conclusions in the following sentences:

Any water which contains air dissolves lead out of new lead pipes irrespective of whether the water is hard or soft, acid or alkaline. The solubility of lead is enhanced when the water contains chlorides, nitrates or free carbonic acid. The quantity of lead which new lead pipes give off to the water is not inconsiderable.

A real protection of the lead pipes against the attacks of the water passing through

them does not exist. Running water does not take up lead in any demonstrable quantity; it is therefore advisable when water had been standing in lead pipes for some time not to use it, but to let this run off first before using.

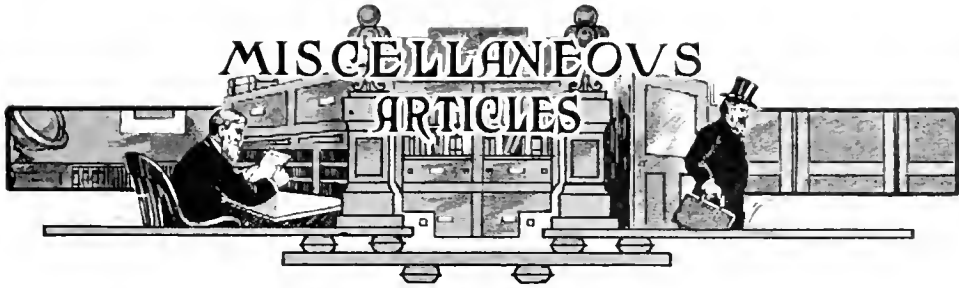
Water which has an alkaline reaction to rosolic acid, and whose carbonate hardness exceeds seven German degrees, attacks conducting lead pipes only when they are new. [Rosolic acid is a triphenylmethane coloring matter, having the formula $C_{20}H_{16}O_3$. It dissolves in alkalis with a red color and is used among other purposes as an indicator. See the "Medizinische Terminologie," by Dr. Walter Guttmann, 1906, *sub verbo*.] The lead dissolving capacity diminishes steadily until it becomes practically a negligible quantity as soon as a protecting coating has formed on the inner wall of the pipe.

Ruzicka's procedure for ascertaining the lead-dissolving capacity (*Arch. f. Hyg.*, 1909, p. 23) does not give data relating to water in conducting lead pipes, since all conducted water contains air.

Chemical analysis alone is quite sufficient for judging whether a water has the ability of forming a protecting coating on the inner walls of a pipe.—"Report to the Royal Testing-Bureau for Water and Sewage," in *Pharmaz. Zentralhalle*, p. 570, 1910.

PLACENTAL OLEIC ACID NOT THE CAUSE OF ECLAMPSIA

Most authors consider eclampsia as the result of an intoxication by toxins of placental origin. R. Freund and L. Mohr have recently derived oleic acid from a four-months' old placenta, have demonstrated it chemically, and have designated it as the specific hemolytic active toxin in eclampsia. But Dr. O. Polano states in the *Zeitschrift f. Geburtshilfe u. Gynaekologie* (65. Bd. 3. H.), that the results of his quantitative analyses, of his experiments on animals, of his clinical and pathologic-anatomical examinations and experience speak against the theory of oleic-acid hemolysis in eclampsia. [Taking pains to disprove a theory is also a grateful service.—THE GLEANER.]—*Wien. Med. Wochenschr.*, 1910, No. 12.



Bites—Snake and Other

I'M discouraged. No other word expresses it. I have ceased to wonder that Copernecius, after a lifetime trying to teach the people, gave up the whole job and exclaimed, "Oh, hell, what's the use?" or words to that effect.

For the past several snows I have bombarded the pages of every medical journal that I could get to accept my manuscript in regard to the subject of serpent wounds and their treatment, still, some genius perennially bobs up with some new fantastic treatment or a solemn reiteration of a paleontologic one.

Now I'm going to make one last supreme effort to cure the medical profession of their obsession, and if I fail, quit the whole business and say, "Go, and the shame of your ignorance go with you."

In the outset, I wish to exonerate the editor of this journal for any expression that may be made use of in this article. He is not responsible, nor do I know that I am voicing his sentiments. They are my own and I am capable of backing them up both physically and otherwise. It may be that I shall rub the fur the wrong way on some of your private hobbies; I may even scrape the slime off some of your pet beliefs, if so, I sincerely hope that my words will have the effect of making you think.

One of the first facts that I wish to rub in is that the human family are fools with regard to serpents. Darwin says that the fear of snakes is instinctive, transmitted to us from our simian ancestry. He says, that the greatest enemy of the monkey tribe is the enormous tree-serpent of the tropics; so it probably ever was. That being the case,

when we begin climbing up the scale of development we brought with us this instinctive protective horror of snakes, and education has not been able to eradicate it entirely. The other view is that the hatred of snakes was implanted in the human breast by Divine decree on account of the successful machinations of one certain gentlemanly ophidian in a garden where our foreparents sat out to raise cabbages that would carry off the blue ribbon of the Euphrates County Fair.

Now, I am not discussing either religion or politics. I've got my private opinion about the matter and which you may have, if it's of any interest to you, by enclosing the necessary postage. Whichever theory you hold to, it is pretty good evidence that you are exercising pretty poor reasoning powers, unless you get down and study your subject by the lamp of reason and thereby lose a little of your foolish horror.

Those Siamese twins of the mind, superstition and ignorance, have surrounded the serpents with a halo of horror. The average man, perfectly rational on every other subject, goes into a mild lunacy when you say "snake" to him. Unfortunately this insanity is not confined to the laity; the medical profession has men in it as "batty" on the subject as the veriest old negro "mummy." Mention rattlesnake, and a lot of medical men turn pale and begin to hunt for a place where they dispense "snake-bite" remedy.

"Come, let us reason together," saith the Scriptures. Let me ask you (I am speaking to medical men now) a few questions and you find the answers for them. I may possibly furnish a clue to the answer myself,

but, for Heaven's sake, don't take my word for it.

How lethal is the virus from any of the New World serpents? How many people do you actually *know* who have died from serpent wounds? How many horses, dogs, cattle, sheep, do you know that have so died? With regard to the persons who have died, what were the circumstances surrounding the case? What treatment was used? What are the chances of being wounded by a venomous serpent even in a country where they abound? These are questions that the average medical man has never asked himself, or if so, has never sought to answer.

I'm going to answer some of them myself, and I'm going to preface the answers by stating that nine-tenths of the persons who die from snake venom die either from fright or the meddlesome attentions of zealous friends or ignorant doctors.

I suppose you will admit that the diamond-back rattlesnake is the most venomous of all serpents. If you do not admit it, kindly read up what Wier Mitchell says. That being admitted, I will assert that the wound inflicted by this snake is by no means as deadly as popular superstition claims. I am inclined to doubt seriously whether a wound inflicted by the ordinary serpent under ordinary conditions will produce death except in certain blood states. From this I must except the little coral snake of the South, beside which the bite of a cobra is as the sting of a wasp. But as the coral is restricted to a very limited area and that area practically unsettled, it does not enter into the equation.

It stands to reason, of course, that if a man be wounded near some large arterial or venous trunk, his condition is rendered all the more grave and, in fact, he is likely to die, but it is a fortunate fact that such wounds are exceedingly rare. By far the greater number are on the extremities where the circulation does not carry the venom quickly to the centers. Such wounds are *never* fatal.

Another thing to be taken into consideration is the circumstances surrounding the accident. The venom is given the serpent as a means of securing his prey. Do not be carried away with any idea that it is for

defense or any other purpose except simply to get his living. If the serpent happens to be fasting, he has a larger supply of venom than if he has only just struck some prey and thereby expended a portion of his ammunition. It requires considerable time for him to replenish his arsenal, a fact that he knows considerably better than you do.

Another thing. A fasting snake gets out of your way if you give him an opportunity. The snake is never the aggressor. He simply strikes from what, in his reptilian mind, he considers self-defense. Give him half a show and he will slip away in the grass or stones. With the serpent filled to plethora it is different. Watch the serpents in the zoo sometime. Those that have been recently fed are sluggish, while those who are fasting present quite a different appearance. So it is with the free serpent, after eating he lies down in the sun and falls asleep. You come along and surprise him, his first instinct is to strike. You get a wound with but little virus, for the virus has been largely expended in capturing the prey.

The season of the year cuts some figure. "Dog-days" the snake is shedding his skin and goes through a two- or three-weeks' fast. At such time he has well-filled poison-sacs and naturally his bite is much more dangerous.

The size of the serpent makes no difference in the degree of poison. A little reason will convince you that it requires as much venom for a small rattler to kill a rabbit as it does for a large one. In my experiments I have never been able to detect any difference in the quantities expelled by large or small snakes.

Now, while I insist that a snake bite is not so fearfully deadly as you have been led to believe, at the same time I am not moochin' around a snake den trying to get bit. It is a dangerous condition, whether lethal or not, and requires intelligent surgical care.

The subject of treatment brings up a slight study of the chemical composition of the venom and its effect upon the animal organism.

All serpent virus owes its toxic effect to two principles: a venom-peptone and a venom-globulin, and these two principles have a diametrically opposite effect upon the animal

tissues. One of them exerts its effect upon the blood, the other upon the nervous organism. One disintegrates red blood, the other paralyzes the nerve-centers. The person wounded first has an increased circulation, followed by a period of depression, and if the dose be powerful enough, the scene ends in death by coma.

Did space not forbid I should like to go more fully into this phase of the subject, but in the foregoing I have suggested enough, I trust, to encourage investigation.

Now for the treatment. A case of serpent bite is one for the surgeon; never the physician. What I mean by that is, there is no remedy for the cure of serpent venom. Kindly bear that in mind.

Whisky, that time-hallowed monstrosity, is responsible for more deaths than any other thing. A man who dies from the bite of a rattlesnake after having been dosed with potations of bad "booze" dies, not from the venom but from his cure. Let me repeat. Of all the vicious remedies that have been devised for snake bite alcohol is the most vicious.

The other snake-bite remedies practically all have the merit of not doing any harm while doing no good. If a man gets struck by a serpent the first thing some fool friend does is to go and fill him full of "booze," thereby adding to the effect of the poison. Ofttimes, when the physician appears on the scene, he, too, hauls out his flask and adds to the fire already consuming the victim. If the poor victim dies, the doctor wisely shakes his head and sighs that he did not get there with his "booze" sooner. If he gets well, then the doctor pats his demijohn on the belly and thanks God that he had the right stuff.

I said the treatment is surgical. Prevent the too-rapid absorption of the toxin and nature will care for a good deal of it. The blood manufactures its own antitoxin, and if given time, will take care of the entire amount. It is when the toxic principle is thrown too rapidly into the circulation that the blood becomes swamped and cannot take care of it all.

Ligation, therefore, is the first and most rational procedure; relieve the pressure from time to time and allow a small quantity of

the virus-laden blood to enter the circulation. At the same time promote elimination by drainage.

Cut over the wound. I said, *cut*, don't merely scratch. Make a crucial incision deep enough and long enough to get below and beyond the confines of the wound, and encourage free bleeding. Wash out the wound with the blood, deplete the limb entirely. Next cauterize. For this purpose actual heat is better than chemical cauterants.

When the period of depression comes on, resort to strychnine hypodermically. *Nothing else*. Watch the patient, and administer the strychnine as often as the condition requires it. Be careful not to overstimulate and thereby defeat your own ends.

A few words in passing on the multitude of remedies that have been foisted on the public for the cure of serpent wounds. All these have been the outgrowth of a lack of knowledge on the subject. Echinacea, which just now has its adherents, will prove a valuable after-treatment for the depleted blood state that follows snake wounds, but as an emergency treatment it is useless; so also with every one of them.

There is *no chemical antidote for snake venom*. Do not lose sight of that fact. And the physiologic antidote must be confined to stimulation, and the stimulant must have but one effect—stimulation; and not like alcohol, exert both a stimulant and a depressant effect.

While I'm digging up and killing snakes, I had just as well go on and finish the job. Somebody in the October CLINIC mentioned a hydrophobia skunk. I thought that old superstition was confined to the darkies of the South. I never supposed that an intelligent physician believed that a skunk could produce hydrophobia. But it seems I am mistaken. *O tempora, o mores!* Light certainly dawns upon the human mind but slowly.

I wish I might have a life-sized portrait of the genius that first discovered that a skunk was inoculated with hydrophobia. It would do to go in the Hall of Fame. I'll give \$100,000,000,000,000,007 to the man who will bring me absolute evidence of a case where the bite of a skunk ever produced

hydrophobia. Mind you, I don't want hearsay testimony. I want the documents to prove the case, including the certificates of three reputable physicians. Bring the proof and claim the reward. If God endowed you with any brains, then for His sake use them. Apply to the subject the rules of logic, then go out behind the garage somewhere and kick yourself for ever believing such an old-woman's tale.

I will pay my respects to the gila monster (*heloderma suspectum*), and I am done. Of all the repulsive-looking creatures on earth I think *heloderma* is the most repulsive. The ignorant Mexicans, seeing him so ill-looking, naturally supposed that nothing so hideous could exist without being poisonous. The gila monster is not venomous. His jaws, armed with rows of jagged teeth, inflict an ugly wound, but there are no poison glands to inject the wound with venom. The creature is sluggish, lives practically without water, and exists upon animal food. His mouth is filled at all times with ptomaines, consequently a wound inflicted by his serrated teeth is quite likely to become septic and should be so treated, but it is not venomous.

CHARLES S. MOODY.

Sandpoint, Ida.

WE SHOULD HAVE A DEPARTMENT OF HEALTH

It seems peculiar that when we desire to institute reform, someone should try to prevent that which is much needed, and, yet, that is exactly what certain persons are trying very hard to do, in endeavoring to persuade Congress not to pass a bill creating a Department of Health.

The fact is that the osteopaths, homeopaths and others are needlessly alarmed and seem to forget that an advisory department of health does not take away the right of a state to enact its own health laws and to regulate the practice of medicine within its borders. And when those who are opposed to the action of such a bureau, on the ground that the American Medical Association will control the new department, it looks as if they are pursuing a will-o'-the-wisp when they suppose that that association could accom-

plish such a result. Upon what grounds can it be supposed for an instant that the association could influence or force a department of health of the United States Government, which after all would only be an advisory or consulting department, to enact such laws as would curtail the privileges of these persons, or to force anyone to any particular line of treatment, or to use any given medicines, or to pursue a course detrimental to freedom and liberty? Would the citizens of a state allow a state board of health to forbid certain individuals qualified to practise to have that liberty or say that such and such a drug shall either be or not be used by a regular practitioner? Of course not.

There always are in every community ignorant ones who would restrict everyone to their way of thinking and who do not believe there is any virtue in anything which does not conform to their own mode of action. But the fact is that in these days of advancement it will not do to decry those things which are unfamiliar to us, but we should be broad-minded and recognize that there is virtue in osteopathy, homeopathy, mind healing, and especially physiotherapeutics. We cannot nowadays leave out these various lines of treatment so well known to the world, nor must we confine ourselves to one line of thought, and forget the fact that though bacteria play an important part in the causation of disease there are other factors, such as climate and auto-intoxication.

Why, then, should these cults imagine that their freedom will be restricted and that the American Medical Association could or would override the rights of a people or force an unwilling public to accept certain views of their own? Nor is it apparent that the Association intends to try to control the proposed department.

As to freedom, it would be well to explain what the opponents of this proposed bill mean by "freedom." If by freedom is meant to allow unrestricted liberty to abortionists to carry on their nefarious business, or that Christian scientists are to permit many to die for want of proper medical aid, or that we are to let disease run rampant and unchecked through the land, then, I say, enact laws to prevent such inposition.

Let us look at this matter in a clear light. While we are making Herculean efforts to increase our commerce and are doing everything to push forward our country to a first-class position, we seem to forget that we may be brought abruptly to a standstill if we do not check the spread of disease, and instead of having a fine, healthful race of beings and a prosperous country, we may lose the prize and do an irreparable injury and have a decaying country.

Recognizing good in osteopathy, homeopathy, and even in Christian science when directed to the cure of certain mental disturbances, and that many are benefited from a psychical standpoint, let us not forget that it is not by treatment alone that we hope to eradicate disease, but quite as much by prevention. With the cholera in Russia, with danger of its spread here, with new diseases unknown to us before, surely, it is time to have a department of the general government which would not only act in an advisory capacity, but which in time of need could aid our people in stamping out disease, and also could provide instruction for the people, to explain to them the necessity of observing proper sanitary precautions.

If we do not put a stop to the ravages of measles, scarlet-fever, diphtheria, mumps, smallpox, and other infectious diseases, we gradually shall weaken the human system and create a fit soil for the propagation of tuberculosis and have still more dreadful diseases to combat.

Instead of trying to prevent Congress from passing a bill creating a Department of Health which would only be supervisory and which would have nothing to do with the regulation of medicine, instead of pursuing an *ignis fatuus*, let us all combine and have a Department which, in case of need, could send able experts to assist the State in time of distress, one which could send out instructive papers on hygiene, furnish reliable statistics of disease, make known the more modern improvements in medicine with the tried and true remedies for ailments, and, as before stated, send lecturers to the agricultural committees, and thus in many ways save many from a life of misery, sickness and death. We pay attention to animals and call in the aid of the Government to

eliminate disease in them, why, then, should we not do the same for the good of humanity?

If freedom means that we shall let unsanitary conditions have full sway and thus disease go unchecked, then, in the name of sound humanity, throw away freedom.

J. G. B. BULLOCK.

Washington, D. C.

TREATING (AND PREVENTING) PNEUMONIA BY THE ALKALOIDAL METHOD

I am prompted to write this by reading an article on "Pneumonia" by Dr. A. T. Conley of Cannon Falls, Minn., as published in *Therapeutic Progress* for January, 1905. The doctor makes a very poor showing in his conflict with pneumonia, and such a condition ought not to exist in the face of the fact that many thousand physicians, distributed mostly throughout the United States and Canada, are treating pneumonia by a method which reduces their death-rate to nearly nothing. This statement is true, notwithstanding its boldness, so do not let it take your breath away, but go on to the end of this article and then determine for yourselves. By way of leading up to this method, I will detail one case.

At 10:30 o'clock, on the night of January 21, I was called to a man living about three hundred yards from my residence. This man is forty-five years old, of strong character, and no baby. I found him screaming with pain at every respiration, and only breathing when compelled to do so. The seat of pain was just below the right nipple and he said he could cover it with the end of his thumb. The skin was hot and dry and the pulse was hard and bounding. I am so accustomed to seeing this condition as a precursor of pneumonia that I did not waste time to make a critical examination of the lung but began treatment at once.

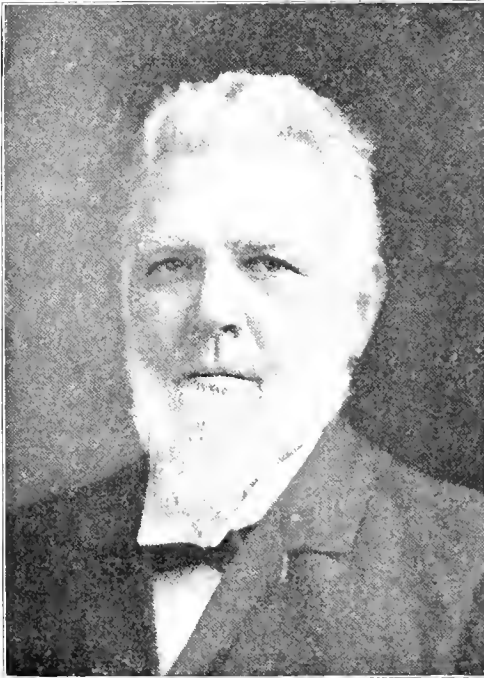
I gave a granule of aconitine, 1-134 grain, dissolved in water. This I followed immediately with 5 grains of acetanilid, 1-2 grain of codeine and a granule of nitroglycerin (glonoin), 1-250 grain, to be held in the mouth and dissolved on the tongue; then sat down to await results. In thirty minutes the skin on the man's forehead showed a

trace of moisture; I gave another granule of aconitine.

At this time the patient said, "Doctor, this thing is spreading."

"Yes," I replied, "I want to spread it so thin that there will be nothing left of it."

I again sat down to await results. At the end of another thirty minutes he was in a good sweat, the pain all gone, and he was breathing deeply and regularly. There was no reason for repeating the aconitine at that time, but I told his wife to watch him, and



The late Dr. Nicholas G. Thomas

give him a granule often enough to hold the condition as it then existed. I went home.

The next morning I found the patient much better. He had taken only two doses of aconitine during the night. I then examined the lung, and found no dulness, but full resonance, and only a little roughness due to slight congestion of the bronchi. I ordered the aconitine continued as required to keep the skin moist. On the morning of the 25th, I met this man at the village postoffice free from all complaint.

One point in the treatment I have not yet mentioned. When I reached him I found his wife had applied a bag of hot ashes over

the seat of pain, and as he said it gave him some relief, I ordered it continued. This proved to be a fairly good substitute for the usual external applications.

Now, this was not a case of pneumonia, but I believe it would have been one had it not been promptly relieved. A pneumonia was prevented. This case presented the conditions which enable the diplococcus pneumoniae to get in its deadly work; but if these conditions are removed, the process is inhibited and pneumonia does not occur.

This treatment is known to those who practise it as the "alkaloidal" method, but it is something more than merely giving the active principles. Certain definite principles underlie our mode of treatment which, as related to this case, I will try to explain.

To begin with, there is a definite amount of blood in the body and if, as in congestion, there is too much of it in any one organ, there is too little somewhere else. Then the necessity for distributing the blood and relieving the congested organ is at once apparent, and the proper use of the proper remedies will do it; and they will do it every time if the condition has not gone beyond congestion. Aconitine is the remedy *par excellence*. It dilates the arterioles and fills them, thus relieving the congested organ. This induced condition of the arterioles must be maintained till the damaged organ has time to recover itself and return to its normal condition, when the patient will be well.

In the condition noted above, aconitine and acetanilid together act more quickly than aconitine alone, while the nitroglycerin braces the heart against both the other drugs, at the same time materially aiding in dilating the blood-vessels, thus hastening the results, the amount of aconitine subsequently needed to maintain the condition being reduced.

It must be remembered that to obtain the best results from this method of treatment, it should be preceded by a thorough cleaning out of the intestinal tract, and then disinfecting it, maintaining the disinfection throughout the entire course of treatment. In the above case this was omitted because the patient had undergone it a few days previously for a different condition, which by now had been entirely removed; so he did not need a physic.

Some of the advantages of the alkaloidal remedies are: exact dosage, promptness and certainty of results, no loss of valuable time while the disabled stomach is trying to do work that ought to have been done by a chemist. By beginning with minimum doses, repeated every fifteen to thirty minutes till effect, and then stopping, results become certain without the possibility of an overdose, making it possible to use the most powerful drugs with absolute safety. It is necessary to know exactly what each alkaloid will do, and to know its physiologic effects when they present themselves. In other words, a man must be a better diagnostician, a better therapist, a better doctor. The prevailing therapeutic nihilism is known to the alkaloidist only to be laughed at.

N. G. THOMAS.

Apison, Tenn.

[Dr. Thomas, the author of this article, passed away more than a year ago. The paper was sent us by Mrs. Thomas, who wrote us of the Doctor's warm enthusiasm for active-principle therapy—an enthusiasm that never left him because it was based upon a high degree of professional success. We are happy to be able to present a picture of Dr. Thomas.—ED.]

A CASE OF TYPICAL PNEUMONIA WITH MITRAL REGURGITATION

I hold that the specific treatment for the condition named in the title is, primarily, mercury in some form, in connection with digitalin. Other remedies may be indicated for special states, but those mentioned are absolutely necessary to the pathology of the case. Neither alone will cure, nor is it desirable to give them successively but must be taken continuously together.

The patient is a woman 64 years of age and has been in feeble health for several years. She was seized with a chill and serious prostration on Tuesday night, and her nearest physician, Dr. Crook, was summoned the next morning; but he was unavoidably detained at home and so sent some medicine, with the instruction to call someone

else if he should find it impossible to call. Thus I was called on Friday morning.

I found the patient with consolidation of the middle and lower lobes of the right lung; short, hacking, suffocative cough; a temperature of 101.8 F., pulse, 100; and marked prostration. The latter symptom attracted my attention so much that I failed to examine the heart on my first visit—and that is what a physician never should fail to do in a case of pneumonia.

My prescription was mercury and chalk, 1 grain every hour for six doses, then every two to three hours until 15 grains were taken. This was given because of the toxemia and was chosen in preference to calomel because milder in its action. The combined arsenates of strychnine, quinine and iron with 4 minims of nuclein per dose were given every two hours, day and night. A few doses of aconitine were given to promote skin action—no other benefit being able to accrue from that drug at this stage.

The diet prescribed was egg-nog, that is, a large amount of raw egg, and just enough alcohol to give a pleasant taste without stimulating. Raw egg is the ideal diet in these cases, but many patients will not take it unless a little alcohol is added to disguise the egg taste. A tablespoonful of this mixture was given every hour when the patient was awake—all that she would take.

Twenty four hours later I found the patient very comfortable, having passed a good night. Her skin was moist and warm, respiration easy; temperature 100; pulse 80 and of good volume.

Delighted with the apparent satisfactory results the medication was continued, but at longer intervals, while examination of the heart was again neglected. Before I made my third visit there came a hurry-message, saying that the woman was smothering to death. This brought me to my senses and I upbraided myself all the way there for my neglect.

On my arrival an examination of the heart showed a marked mitral regurgitation. Without delay I administered tincture of digitalis, 10 minims; tincture of strophanthus, 2 minims; and strychnine sulphate, 1-30 grain. In a very few minutes breathing was relieved and the patient felt comfortable.

The thermometer then showed a temperature of 101° F. Thereafter the patient received half the foregoing dose every hour, for four hours, then every two to four hours as needed. As she said her gums were a little tender, the mercury was dropped and the combined sulphocarbolates, in 5-grain doses every two hours while awake, were substituted. The next day the temperature was down to 99.5° F., while all the symptoms were markedly improved. A dose of castor oil was given each morning to insure one good passage daily. The woman was discharged on the tenth day of her illness, showing a subnormal temperature.

Now I am as sure as sure can be that if I had examined that heart on my first visit and given the digitalis combination and mercury I could have discharged that patient two or three days earlier than I did.

Mercury is indicated in these cases, first, because of the toxemia, and, second, because of the pathologic state of the liver which always obtains, and it is synergistic with the heart remedy. The second point that I want to make is, that when physiologic symptoms of mercury appear, the work of inhibiting the toxemia will be most brilliantly completed by the combined sulphocarbolates, in a majority of cases.

It is a matter of no importance to me whether the sulphocarbolates are germicides or not, my experience with them shows that they are thoroughly destructive of the toxemia of pneumonia, almost invariably completing the cure which mercury has begun and often can only carry to a certain point.

My rule is, as soon as the temperature rises after having fallen, to change to the sulphocarbolates; and it is surprising to see it fall and all other symptoms improve *pari passu*.

I expect Brother Abbott will pounce upon me for not using digitalin instead of the tincture. My experience, however, with these cases has been that, except when there are indications of dilatation, I get better results from the tincture than from digitalin.

M. B. TULLER,

Crawford, Ky.

and ours is for digitalin, especially in these days of digitalis crop failures, when nobody seems to know where "good English leaves" can be secured.—ED.]

THE TREATMENT OF PNEUMONIA

The object of treatment in pneumonia should be, to prevent toxemia and heart failure. If this is no longer possible, every means should then be employed to prevent further damage. As fever is an indication of the former and a contributory cause of the latter, the necessity of reducing fever by remedies that act on the cause, is very apparent. Whatever lowers an elevated temperature, even in septic diseases, in some way acts upon the cause.

To prevent toxemia, calomel and saline cathartics should be given early and until free purgation is produced. Sulphocarbolates should then be administered daily. Some form of nuclein is also necessary to assist nature in repelling the bacterial invasion. If the patient is an inebriate, the greater is the necessity for a thorough calomel purge.

To prevent heart failure strychnine should be prescribed from the beginning, even where there is no sign of weakness. If, however, the pulse is feeble, rapid or irregular, caffeine and digitalin must frequently be given with the strychnine. If the skin is pale and moist, glonoin is the remedy. If the object at any time should be to increase the number of heart beats 20 or more per minute, and the skin is moist and pale, atropine is the remedy of choice, and the hypodermic route the best.

The indiscriminate use of antipyretics undoubtedly serves to weaken the heart, particularly in asthenic conditions. In sthenic cases, with full pulse, flushed face, hot dry skin, some febrifuge *at the beginning* of the attack is very useful, and is not injurious if not prolonged or given in too large doses. Aconitine given in small doses every half hour until the pulse becomes slower and fuller, the fever declines, or until tingling of the tongue or lips is manifest, is a safe and effective remedy. Usually within twenty-four hours the improvement becomes manifest if treatment is

[Pounce upon him? Not a bit of it! Every man is entitled to his preferences,

begun shortly after the rigor. Very often complete recovery follows within 36 to 48 hours. After hepaticization sets in, aconitine should not be given, unless in conjunction with digitalin and strychnine.

There is no remedy that is so rapidly effective in reducing fever, especially high fever, as cold bathing, sponging, or wet packs. These stimulate deeper respiration, quiet restlessness, delirium and relieve pain. The feet must be kept warm, and if the head is particularly hot, ice bags should be applied there. High enemas of cold water will also quickly reduce excessive heat.

Give neither aconitine nor coal-tar derivatives where there is a feeble pulse, and pale, wet skin. Glonoin, camphor in hot milk, tincture of capsicum and strychnine are indicated, in such a condition. *Do not use remedies that bring about similar bad conditions or increase them, but use those only that produce opposite effects.*

For cough that is incessant, dry and painful, give codeine. If the sputum is copious and thin, use camphor, apomorphine and capsicum. If the sputum is tough, prescribe calcium sulphide and nuclein.

For pain in the chest, apply wet packs and give codeine.

Feed on beef-, lamb-, barley- and rice-broths; give artificial buttermilk and plenty of cold water.

Sodium chloride should be given by the rectum (in high enema), 2 drams to one pint of warm water twice daily, or 2 drams by the mouth in divided doses during each twenty-four hours. Do not wait until the sodium chloride disappears from the urine. Anticipate hurtful tendencies and forestall them whenever possible. Sodium chloride is needed by the blood to properly perform its germicidal property and to maintain osmosis.

JOHN M. SHALLER.

Denver, Colo.

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[It doesn't seem possible to add much to Dr. Shaller's excellent resumé, unless it be by filling in some of the detail.

I like to give the calomel with podophyllin in 1-6-grain doses repeated every half-hour or hour till a grain of each has been taken, following with magnesium sulphate after

about six to eight hours, and repeating every two hours if necessary "to effect." In case of doubt as to thoroughness of action clean out the lower bowel with enemas. The sulphocarbolates are used, of course.

Dr. Shaller is a master in the use of aconitine, and his suggestions concerning its combination may be followed *verbatim et literatim*. In view of the difficulty of supplying digitalin, which is still scarce, we suggest that it may be replaced, in case of necessity, with sparteine, using this drug in full dosage, i. e., 1-2 to 1 grain, or with adonidin, gr. 1-67.

Our eclectic friends would say that the doctor is leaving out some important remedies—for instance, bryonin for the pleurisy-pains present in most cases. Veratrine is also an exceedingly valuable remedy, especially where there is intense congestion and rapid elimination is indicated. Associated with aconitine and digitalin in the defervescent compound it certainly does valiant service in cases of the sthenic type.

We want to urge physicians who believe that "nothing can be done for pneumonia" to try the methods advocated by Dr. Shaller. We shall be surprised, indeed, if they do not become as enthusiastic as the rest of "those alkaloidal cranks," provided they try the methods with earnest hearts and open minds.—ED.]

HOW ANOTHER MAN TREATS PNEUMONIA

The term pneumonia, as the negro remarked, "sounds ha'ash to me." When I find a patient with high temperature, quick bounding pulse, rapid respiration, skin hot and dry, with considerable dulness in the lung, I'm filled with dread. The practitioner knows there is no time for delay. This is not the time to administer a placebo and await the development of the disease. The watchword to every earnest physician in conditions of this kind is to *get busy!* I want to emphasize the great necessity of getting d—d busy. Here's your opportunity of doing something and only those who have absolute confidence in well-timed therapeutic measures can appreciate the great value of a few well-directed blows at this great

enemy of mankind, which steals upon our loved ones like "a thief in the night."

A few doses of calomel with a following dose of saline laxative to clean out the alimentary canal is an absolute necessity. An intestinal antiseptic (sulphocarbolates) every two hours to keep it clean is another necessity.

Here's the place to push your aconitine, digitalin and veratrine (veratrine in cases of full, bounding pulse—sthenic cases, with strychnine instead of veratrine in cases of quick, thready pulse—asthenic cases) every fifteen minutes to effect, then every two hours to maintain that effect. This is another absolute necessity. Nothing like nuclein solution as a reconstructive agent. Your patient will rest better under full doses of nuclein, and rest is another absolute necessity.

Don't expose the patient by using hot poultices on the chest, nor tax the chest muscles by adding additional weights such as heavy plasters of "muds" of various kinds. Envelop the chest in cotton saturated with the old-fashioned formula, Stokes' liniment, with guaiacol (one dram to the ounce) and cover with oil-silk. To my mind this is superior in all respects to antiphlogistine. A protective to the chest is another absolute necessity.

Codeine or heroin in small, oft-repeated doses to control cough is another necessity.

If an expectorant is needed use sanguinarine, emetin, or any of these products, but a splendid one, especially in cases of delayed resolution, is a combination of emetin, pilocarpine and codeine.

Light, nourishing diet.

To recapitulate those necessities in the successful treatment of pneumonia:

1. Calomel and saline laxative to clean out.
2. The intestinal antiseptic to keep clean.
3. Defervescent compound to equalize the circulation.
4. A chest protective.
5. Control the cough and obtain rest and comfort.
6. Nuclein solution as a reconstructive.
7. Light, nourishing diet.

8. Always dosage to a sufficiency—and God only knows how many lives you can save, how much disease you can conquer, and how nearly to the ideal physician you will really approach.

Did you hear me say anything about aborting your cases of pneumonia? That's what I mean. Follow the ideas suggested, in your treatment, and there will be a miscarriage of the *diplococcus pneumoniae*, as sure as you get to your patient in time, and *get busy*.

WM. W. BAILEY

Le Claire, Ia.

SOME SOUTHERN MEDICAL MEETINGS

Within the last few weeks some of us have had the pleasure and privilege of attending two of the leading medical association meetings in the South. We enjoyed them so much that we should like to give a large amount of space to a description of the meetings themselves, the papers read and the men we met.

The first meeting was that of the Southern Medical Association, which was held this year at Nashville, Tennessee, November 8. There was a large attendance of physicians from all over the South and there were many attractive features at this meeting; one of the most interesting to the writer being the beautiful address of welcome delivered by Dr. W. D. Haggard, of Nashville, a part of which is quoted in our editorial section this month. There was also a fine address by Dr. John B. Murphy of Chicago. I especially enjoyed the talk of the President, Dr. W. W. Crawford.

I haven't room enough to tell about the many magnificent papers which were delivered and of the fine discussions, but the program was rich indeed.

Dr. Isadore Dyer of New Orleans was elected President of this Association and Dr. Scale Harris of Mobile, secretary and treasurer. Hattiesburg, Mississippi, was chosen as the next meeting place.

Among the many delightful social features of the meeting was the visit to the Hermitage, the home of Andrew Jackson.

The other meeting referred to was that of the Tri-State Medical Association of Missis-

issippi, Arkansas and Tennessee. It was presided over by Dr. J. S. Rawlings of Dancyville, Tennessee. The secretary was Dr. Eugene Rosamond of Memphis. While the meeting was not attended by delegates from remote distances yet the program was excellent and thoroughly enjoyed. I wish I had the time and space to tell about some of the splendid papers which were read.

The activity of these southern medical associations reflects in a way the intellectual and material uplift of the new South. It is growing by leaps and bounds. It is a pleasure, indeed, to mingle with these brethren of ours south of Mason and Dixon line. Nowhere in our country can we find a more intellectual and progressive class of men—men who are imbued with warm love for their profession. Nowhere can we find men who are more warm-hearted and friendly than these men. When we mingle with southern physicians we do not feel like strangers. As a matter of fact, we are constantly meeting real brothers who know about our work and approve it, read *CLINICAL MEDICINE* and enjoy it.

In the American medicine of the future the South must be reckoned with. We of the North have no monopoly either in medical centers or in great medical men. Nashville, Louisville, Memphis and Baltimore are turning out hundreds, yes, thousands of bright, energetic, well-trained physicians coming from the very best blood of the South. The South not only has a future in medicine but it has a past. We cannot forget that such men as Ephraim McDowell, J. Marion Sims and John A. Wyeth have brought honor to American medicine—and their honor is ours.

Some of these days we hope to renew acquaintance with the friends made in Nashville and Memphis, and we shall take the very first opportunity to mingle again with our brethren of the South.

SEND FOR THE ANNUAL INDEX

The annual index for 1910 is now complete—will be printed by the time this reaches you and will be supplied free to every subscriber of *CLINICAL MEDICINE*

who will send us a postal card telling us that he wants it.

In order to prepare this with all the care which we desired it was found impossible to get it ready in time for mailing with the December number; and on account of the size of our January issue, which is to be unusually large, it was thought inadvisable to have it bound in with this number.

We have, however, printed a large number of the index, and we sincerely hope that every reader of *CLINICAL MEDICINE* will send for a copy. A good index, when carefully and frequently used, makes every article which has appeared during the year immediately available for ready reference and adds 500 percent to the value of the journals themselves.

Every reader of this journal should keep his back numbers and have them bound, and for the convenience of those who desire to do so we will take orders for binding. The price is \$1.50; the twelve numbers to be sent us all charges prepaid, and the subscriber is also to pay the express charges on the bound volume which is returned.

At any rate, send for the index.

OPTIMISM IN MEDICINE

Sir Arthur Conan Doyle, who gave the introductory address at St. Mary's Hospital on "The Romance of Medicine" (*Lancet*, Oct. 8, 1910), said, among other excellent things: "Above all, no doctor has a right to be a pessimist. If you are conscious of that temperament you should fly the profession. A reasoned optimism is essential for a doctor. He must believe the best, and so he goes half-way to effecting it. We have known for all time that the cheery man was the healing man, but now in hypnotic suggestion we come upon the physical explanation of the fact.

"If you can convey the expectation of cure you have served your patient well. You need not go the lengths of a doctor I knew, who used to say to his neurotic and hysterical cases: 'Now, Miss So-and-So, you will take three doses of the medicine, and then watch the clock till it is quarter-past five, and at that instant all your troubles will disappear.' It is true that his prophecy

was often fulfilled, and, yet, the method was perhaps a little crude for general use."

WAS IT MALARIA? OR CHOLANGITIS?

I have been a reader of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* for less than a year, but in that time I have received a great deal of good from it, although thus far contributing nothing for other readers to think about.

A recent case I had was somewhat of a puzzle, not only to me but to others with whom I had consultations.

T. M., age 26, male; dark complexion, dark hair and eyes; about six feet tall, weighing, when in good health, 175 pounds; previous history good; never sick since childhood, when he had measles, whooping-cough and mumps. Family history good; mother living and in good health; father killed by an accident. Has no brothers or sisters.

In March of this year the man began working for an oil company in New Jersey, firing one of the furnaces where he was subjected to a very high temperature. One evening (he worked one week daytime, the next at night) after he had tended the fires he went out and sat down in the cool night air, which at the time felt pleasant. The next afternoon on awaking and starting to get up, he found that his fingers were stiff and drawn up, and he was almost unable to straighten them. His arms and legs also were very stiff and caused him considerable pain when attempting to move them. He did not work that week nor part of the next. When he did go back to work he began having chills every night. He could stand in front of the furnace during one of the chills and not mind the heat in the least. Sometimes he would sweat following the chill, at other times not.

This state of affairs kept up for about three months; finally he became so weak that he had to give up work and take to bed, and remained confined to the bed and house for the greater part of two months with what he said was "chills and fever." He commenced to get out about August 1 and then went on a yachting trip on the sound. He had been on a very light diet before this, but as soon as he started on this trip he be-

gan eating anything that he wanted, and I guess he wanted everything in sight. On August 24 he came to northern New York to regain his health, and this is where my observations began.

August 27 at 9:30 o'clock in the forenoon I was called to see this man. He was in a violent chill; temperature 102° F.; pulse 99; respiration 24. The chill had been on since 8:45 a. m. He was as yellow as any "Chink" that I ever saw. There was pain in the region of the liver and spleen, the latter being somewhat enlarged. He complained of slight soreness about these regions and also over the abdomen. Almost the entire colon was full of fecal matter, the bowels having been inactive for two days. There were also headache in the frontal region, coated tongue and a very foul breath.

I did not attempt a diagnosis at this time, but got busy and cleaned house. Gave calomel, 1-10 grain every half hour until a grain had been taken, followed by a saline laxative. At 4 o'clock that afternoon I received word that there had been a very thorough action of the bowels and that the patient was feeling fine. At 6:30 p. m., however, I received a hurry call.

I found him in a chill very similar to the one he had in the morning. I ordered hot-water-bottles put around him, also a hot lemonade to drink. In a short time we had him sweating very freely. (He did not sweat very much following the chill in the morning.) At the height of the evening chill his temperature was 99.4° F. During the fever it reached 103.2° F. I now put the patient on quinine, 1-grain doses, and ordered another purge in the morning, to be followed by the intestinal antiseptics.

The morning of the 28th of August we had a nurse in attendance. I then ordered hot-packs of sodium bicarbonate water when the chilly sensations began to appear, which usually were heralded by a cold nose as a sure sign. The chill was just as liable to come on when the temperature was 103 degrees as when it was down to normal or subnormal. The urine was practically normal, only the quantity passed was small, about 1000 Cc.; hemoglobin was 80 percent, with a slight leukocytosis. I examined also for malaria organisms, but found none.

Not being satisfied, I sent a specimen to an Albany laboratory and requested a Widal and malaria test. Both tests were negative.

The chills, fever and sweats continued for two weeks in a very irregular manner. Sometimes the patient would have a fever without the preceding chill, and then, again, a chill without the fever or sweat. The chills and fever would come in the morning one day and in the evening the next; then they would skip a day for a change. The tenderness over the abdomen left after two days and did not return. The heart remained in good shape throughout.

Just three weeks from the time I saw him I discharged this man as cured. For all that, I have not been able to surmise just what disease he was cured of. Two weeks afterward I saw him and he told me that he had gained seven and one-half pounds. I forgot to mention that from April 1 to August 1 he had dropped from 175 pounds to 138 pounds.

My treatment throughout was: quinine in 1-grain doses; calomel, 1-2-grain doses, as indicated; Fowler's solution, 1-drop doses; and the intestinal antiseptic three times a day. Nothing but Saratoga vichy water was drank. The diet consisted of liquid foods until the temperature had been normal for four days.

In some respects it looks as if this was a case of malaria, still, to my mind there is not enough to diagnose malaria on. There were absolutely no organisms to be found. If any one can arrive at any conclusion from this mess, I should like very much to see some remarks on it.

"D."

—, New York.

[The doctor gives us rather a hard nut to crack, but we should say, from his description, that the case was most emphatically *not* one of malaria. Aside from the positive statement of the laboratory consultant that the malarial organism was absent, the irregularity of the chills and fever discounts the possibility of that disease being present. The clinical picture is that of *sepsis*, and the symptoms point toward the liver as being the seat of attack. When we have to deal with chills, fever and sweating, recurring at

irregular intervals, we should always think of the possibility of infection with the pus organisms—usually streptococci. Malaria is practically always characterized by definite regularity and periodicity in the recurring paroxysms.

The weak point in the diagnosis of sepsis appears to be the doctor's statement that there was "slight" leukocytosis. We should expect this to be decided. Unfortunately he fails to give us the leukocyte count, and does not tell us whether this was made often enough to insure accuracy. We should remember, also, that if the sample of blood is taken during an acute stage of the disease, when the body is overwhelmed with the poison, the leukocyte-count will be lower than it will be earlier or later. We have the feeling that a further study of the blood would have shown marked increase in these cells. The jaundice suggests hepatic complications, and in association with the other symptoms noted makes us suspect that this was a case of septic cholangitis. We should be glad to know if there was occasional clearing up of the icterus during the course of the illness, or any attacks of severe abdominal pain during the patient's history—since the passage or partial passage of gallstones might have occurred.

In cases like this, in addition to the examination of the blood and urine there should also be a careful investigation of the stools. This might give information that would positively clear up the diagnosis.

We thoroughly appreciate the importance of the "house-cleaning" which the doctor instituted. It was a most important—indeed, an essential part of the treatment. Once the alimentary canal was placed in a comparatively aseptic and properly functioning condition, a big step was made toward recovery. In addition, we should have been inclined to push the remedies that directly combat sepsis, such as echinacea and calcium sulphide, and should have tried the stimulants to hepatic activity like boldine and the bile salts. Nuclein, as supporting the defensive forces of the body against germ invasion, was distinctly indicated. But, after all, perhaps the most important indication was thorough cleaning and cleanliness of the bowel, since thereby drainage of the

bile-passages would be favored and the likelihood of further infection diminished—and this indication it is evident the doctor tried to meet.

This is a good case for discussion, and we shall be glad to hear from the family.—Ed.]

ASCITES CURED BY MERCURY PROTOIODIDE

Here is an experience from practice that may interest readers of CLINICAL MEDICINE.

A lady patient of mine was afflicted with ascites to such an extent that I thought her abdomen would surely burst. Her trouble started with the grip in February, 1908. I first attended her in March, 1908, at which time she was troubled with neuralgia, beside several other complaints, first one thing, than another. In about two months a considerable amount of dropsy developed in the feet and legs, lasting approximately two months, when this swelling disappeared and ascites began to develop, and by Christmas time the distention had become frightful.

The patient was between 50 and 55 years of age and the mother of eight healthy children. I could find nothing wrong with heart, liver, lungs or kidneys, nor could I find any trace of syphilis or of female trouble, except that there had been an occasional pain in the region of the liver for some eighteen years, i. e., since the birth of her next to the last child. Nothing wrong was found by vaginal examination. I was able to relieve to some extent the ascites, from time to time, by purgatives and diuretics, using the medicines that I thought might give relief, according to circumstances. The family objected to aspiration.

I had counsel, but treatment failed of any permanent benefit until, in the beginning of the year 1909, I read in CLINICAL MEDICINE that protoiodide of mercury properly administered would cure hydrocele. As the abdominal cavity is lined with the same serous coat as the hydrocele, I concluded to give this drug a trial. The mercurous iodide was administered in a similar manner as it would be in the case of syphilis, and, lo, in two months we had a perfectly healthy woman who was doing her own housework.

She has taken no further medicine for now one and one-half years.

I am now employing the protoiodide in many instances where formerly I gave calomel, and with good success.

W. W. SADLER.

Hershey, Neb.

[Of course the protoiodide of mercury is not a specific for "dropsy" and we naturally wonder how it acted in this case. Syphilis of the peritoneum is rare, but it does occur and may be considered a possibility. However, the dropsical swelling began in the feet, which seems to indicate either cardiac or vascular weakness. Perhaps some readers can tell us something more about this peculiar action, which seems to be a therapeutic find of real value.—Ed.]

UTERINE INVERSION AND STERILITY

Some twenty years or more ago, I got busy once. I had a primipara on hand, with breech-presentation and very slow, and so I put in my spare time with a multipara who was not so slow. Baby was born all right. With the other case on my mind and not wishing to lose the prospective fee, I hurried a little (more than I really intended) and with Credé's method of manipulating the uterus and a little traction on the cord, the uterus inverted as beautifully as you please. The placenta was nicely attached all around—and, oh! how easy it was to peel it off, so handy to get at, and I could see that no part remained to cause sepsis.

As I viewed the inverted uterus, visions of postpartum hemorrhage from all those open little mouths passed through my mind, thinking the inverted condition would increase the bleeding; but nothing of the kind occurred. An assistant giving chloroform, the womb was easily replaced. Recovery was normal.

Now, this woman was like the old woman who lived in a shoe: she was having so many children she did not know what to do; but this occurrence put a stop to it. How can this be? Is such skill (?) displayed a sure cause for sterility? The "family" will please not sing "yes" all at one time, or it might make me adopt this as my specialty.

The thing would fill a long felt want—and it is so easily done!

From this muddled account this one thing at least should be gleaned: Do not allow yourself to get in a hurry unnecessarily.

W. V. M. TAYLOR.

McKeesport, Pa.

FROM A FAITHFUL DOCTOR'S WIFE

I am Mrs. Hawkes, wife of the doctor who sent you the family group a few weeks ago. I am tonight sitting up with the Doctor, who has been ill for the last three months. He was taken sick the day our baby (Isaiah Jones Hawkes, Jr.) was one year old. He had double pneumonia the first of last May. This makes the second time he has had pneumonia. Four years ago he had it in his left lung. Now his physicians say it has left that lung in such a diseased condition that at his age, eighty, he can never rally from it.

Now, Doctor, is there anything that you could send or recommend that might help him? He says he knows if he could get to Chicago you could cure him—so great is his faith in you and your treatment. I forgot to say, he coughs half of the time and raises a great quantity of sputum; both of his feet are badly swollen and he has no appetite at all. Doctor, I know you will do what you can to restore him.

You asked for a little story to go with the picture. Well, you know I am mentally in no condition to rehearse the past eleven years of my life spent with him. To say the least, it was like a beautiful dream. He was born and raised a straight-laced quaker, and he is one of the best and noblest men I ever knew. He has the brightest and wittiest disposition that ever a man possessed. We have three of the healthiest and prettiest children in the state—taking the premiums at baby shows wherever they go. The Doctor was born in Portland, Maine, in 1830. He graduated in Canada and practised there almost ten years, coming south for the benefit of his first wife's health. My father's and grandfather's families were among his first patients in Virginia. He was called in through a mistake of one of the servants, and as the case required immediate

service he, of course, remained. His superior ability and his charming ways compelled my father to employ him, in spite of the prejudice which my father bore, at the time, for a "Yankee." He jumped me many and many a time on his shoulder when I was a baby.

In 1896 he was given up to die with chronic diarrhea by all his physicians in Richmond and Baltimore. After learning of you he tried your treatment and was speedily restored. He was so enthused that he at once adopted the alkaloidal idea. The Doctor has since practised this method with almost perfect success, curing in nearly every instance—even the old discarded patients of other doctors which had been pronounced incurable. He says now that he has but one regret, and that is that he can not be young once more and practise medicine all over again; for now it has become a pleasure, instead of discouraging and disgusting, as it was in the past.

I might write all night and never be able to tell you all the praises he has paid you and your method of treating diseases.

Now about his illness. We have discarded the trained nurse and we are going to run the case ourselves, and with God's will and your help we believe we shall get him around and about once more. He says if he should ever get strong enough, he is going to Chicago to see you, and from there to California. May our Heavenly Father see fit to bless us in our work is the wish of your true friend.

MRS. I. J. HAWKES.

East Richmond, Va.

[This beautiful letter reached us several months ago, and we replied immediately, trying our very level best to give this dear lady and her husband some assistance in their fight for that useful life. We have waited, before publishing the letter (and the picture that accompanied it), hoping that we might be able to tell the brethren of the "family" and their wives (for this is a case that interests us all) that Dr. Hawkes was on the road to recovery. Through the mis-carrying of a letter we have only just learned that Dr. Hawkes passed away September 8, last.

¶ There is, somehow, a peculiar tie between men like Dr. Hawkes and ourselves. We have been trying all these years to help doctors who are anxious to do better work. This wasn't because we felt ourselves wiser than other men, but because *we* wanted to learn and were willing to give what we had in exchange for the knowledge and skill of our brethren. Earnest men like Dr. Hawkes met us half way. Is it any wonder that our hearts go out to them, and to theirs, in time of trouble, and that they should come to us for help—and through us to that great clearing house of professional skill, the "family"?

What a beautiful family Dr. Hawkes has. Turn to the full-page picture on page 19. Isn't that a pretty good argument against the theory that young wives and old husbands are necessarily condemned to unhappiness?—ED.]

"BAUNSCHEIDTISMUS"

In the August number of CLINICAL MEDICINE a query as to the Baunscheidt method of treatment is answered by quoting from "The Standard Formulary." At the risk of being considered presumptuous, I must say that I feel sure the answer is incorrect. My preceptor, Dr. C. H. Blecken, was a finely educated German who during his life made a specialty of this treatment. I learned the method of him in 1873, receiving the *lebenswecker* and the oil manufactured in Germany and Baunscheidt's book. ["Lebenswecker," in English, is rendered as "resuscitator," literally meaning "life-awakener."—ED.]

The German instrument and oil are considerably more elegant than those made in this country. The resuscitator consists of a neat cylinder of hard wood, for the outer part, which, in a small instrument, is eight inches long. A round head of solid lead five-eighths of an inch in diameter and three-quarters of an inch long has one end set with twenty very fine sharp needles, while to the opposite side is attached a spiral brass spring running through the wooden cylinder and terminating in a wooden thumb-piece.

The oil is described in the book as being produced from the yellow ant of Germany.

However this may be [Oleum and spiritus formicarum—ants extracted by olive oil or alcohol—is an old-time old-country remedy, even to this day, although now a solution of formic acid often is substituted.—ED.] it is a finer preparation than that made in this country. My preceptor had specimens both of the German and the American oil and instruments, but gave preference to the former. He was not positive that the oil was from the ant, since it has the odor of oil of tigilium and is also an active physic. Being a thinker as well as experimenter, he originated several formulas, as follows, for specific effects:

Resuscitating oil No. 1: Oil of tigilium, drs. 2; olive oil, yellow, drs. 6.

Oil No. 2: Oil of tigilium, drs. 3; olive oil, drs. 5.

Oil No. 3, his strongest-grade oil: This was made by putting from six to twelve live honey-bees in 1 ounce of oil No. 2 and agitating them till they were drowned. This angered them, so that they threw out their virus, rendering the oil more powerful. This No. 3 oil was used in the worst infections, such as syphilis.

The proper method of application is not to "rub the oil into the wounds produced," but to apply it over the surface to be treated by means of a soft camelshair brush first; then apply the instrument smartly surrounding the affected region, continuing in a spiral toward the center. Repeat this, say half a dozen times, till the skin shows a pink glow.

When a general application was required, as in great constitutional disturbances, the chest was covered with the punctures, then the entire back from the top of the shoulders down to over the gluteal region; also the calves of the legs. If headache or eye trouble was present, the back of the neck was treated from ear to ear. A sheet of cotton wadding is split and spread all over the parts treated; a gauze vest is slipped on to hold it in place, and not removed before the fifth day.

One soon feels as though he were near a warm stove, and if the patient has aches or pains they take their flight about this time. The skin will sting and prickle for three or four hours, and assume a measles-coloration; in twelve hours it will resemble a scarlet-fever rash; in twenty-four hours the little

pointed eruptions will be filling with serum, continuing to increase in size and color until by the third day the surface is mostly covered by pustules of all sizes, beginning to break. At this time the patient is likely to "get busy," inasmuch as scratching seems "the one thing needful." By the fifth day, when the old skin and cotton has been "shed off," the patient feels "new born."

The application was repeated by my preceptor every fourteen days till the patient was cured. Any medicine indicated was given internally, as Dr. Blecken was one of the early students of specific medication.

I have experienced the renewing feeling of this treatment, as it was administered to me for some catarrhal and bronchial trouble when I first began my medical studies.

In treating a number of cases in a day, the operator was likely to be physicked, which led my preceptor to suspect croton oil. He frequently gave three or four drops of the oil internally when he desired a quick unloading of the bowels.

From my knowledge of the physical properties and action of the oil, I feel that we have good reason to consider oleum tiglii, instead of an oil of cantharides, the active ingredient of Baunscheidt oil.

Whether Baunscheidt was a regular physician or not, I do not recall, inasmuch as his book is not at hand. I do know, however, by seeing Dr. Blecken's work, as well as from my own experience in many cases, that the treatment will do what drugging internally often can not do. It is not always practicable, but in selected cases, as is true of all good remedies, it is *the* thing.

For years I have thought of calling attention to this method, but the "spirit" did not "move" me until the brother's inquiry was read.

M. M. Cook.

Seattle, Wash.

[A copy of the translation of Baunscheidt's book has been kindly lent to a member of the staff by the Lloyd Library. It is the ninth edition and is entitled "Baunscheidtism, or a New Method of Cure. By Carl Baunscheidt, 1861." Baunscheidt, it seems, was a mechanic living in the City of Bonn, and he invented his system of cure about

the year 1844. Of this, he says himself that it was not suggested by the acupuncture then in vogue in medicine, but rather by the stinging gnats (the European mosquito) which viciously, one day, were attacking his rheumatic hand, whereupon his pains vanished "almost instantaneously with the departure of the insects." This reminds us that even within very recent years the sting of angry bees has been seriously recommended as a cure for rheumatism.—ED.]

AUTHOR OF "A DOLLAR OR TWO"

I think this poem (See CLINICAL MEDICINE, November, 1910, page 1246) was written by Col. J. A. Joyce of this city. He has published a book of his "creations," and if my recollection serves me correctly, this is one of them. Col. Joyce is a more or less frequent writer for the local papers. At all times his brain (*via* the pen) creations are very readable. He also claims the authorship of "Laugh and the world laughs with you, weep and you weep alone."

W. C. MERTZ.

Washington, D. C.

SKIN DISEASE IN BABE CURED BY CALCIUM SULPHIDE

A few weeks ago a youngish woman (a stranger) came into my office, who turned out to be ignorant, careless, dirty, the mother of six children—and only twenty-four years old. The youngest child she had with her, a babe of eight months, dirty beyond belief, and the most forlorn, abject piece of humanity one would ever hope to see, marasmus and all the other ills that flesh is heir to written in its pinched face. Dieted, of course, on condensed milk. This babe had scattered over the body, particularly over the lower part of the abdomen and thighs, large blebs containing a dark, irritating serum: wherever a bleb was opened a nasty, suppurating ulcer occurred. The arms and hands, too, were covered with these sores. Prognosis: a dead baby. Treatment: 100 calcium sulphide granules, 1-6 grain, one every three hours. No report for three weeks. Then I discovered the babe well and doing well, even on dirty condensed milk. Query:

Which turned the trick, Mother Nature or Christian science?

E. L.

—, Michigan.

COMPLICATIONS FOLLOWING DELIVERY

In this article it is my purpose to cite a few instances where, in this age of hurry, the physician in his obstetric practice must be content to "stay by" even though other work must wait or seek treatment elsewhere.

As all of us who have been out in practice a number of years well know, in far too many cases the physician takes his leave of his obstetric patients altogether too soon after the birth of the child. It takes less time, of course, to pull on the cord and jerk out the placenta and membranes (or at least the major portion of them) than it does to follow the Credé method of expression by steady pressure on the abdomen in the axis of the uterus; yet, the danger of septicemia from decomposing placental debris and the certainty that the afterpains will be more severe than where the Credé method is followed are abundant indications that undue haste on the part of the physician in the lying-in room is, from the patient's standpoint, most distinctly contraindicated. Well do I recall instances where a few days after obstetrical attendance from some ignorant midwife or from some hurried physician I was called and found it necessary to clean out of the uterus a mass of foul-smelling, decomposing matter, the patient in some instances having a high fever, with coma. Under such a condition as this the uterus is in a very friable condition, and the use of the curet and dressing forceps is attended with great danger, although far less than that arising from the absorption of septic products.

Another reason why a physician should "stay by" at least an hour after delivery, is that sometimes postpartum hemorrhage occurs after what seemed to be a normal accouchment. It has been my lot more than once to find that to be the case. If I had not taken the advice of my old professor at Ann Arbor to stay by my obstetric cases, as a routine measure, for an hour after de-

livery, several women who now are alive and well would have succumbed to this serious complication, postpartum hemorrhage, that is. In fact, I had one case where an hour and a-half after forceps delivery the patient was suddenly taken with postpartum hemorrhage, showing that in forceps delivery the physician by all means should remain for at least that length of time.

Traction with the forceps serves as a sort of pump action, the atmospheric pressure being removed from the engorged vessels of the endometrium, and where in such case there is in the system a decided lack of tone, the patient is in danger of sudden and severe hemorrhage.

Still another complication which sometimes follows labor (and not necessarily only a few minutes after, either) is surgical shock. Where there is such a sudden relief from a long-continued pressure the abdominal vessels sometimes suffer from deficient vasomotor control. Fear of the anesthetic or that the child may suffer mutilation from pressure of the forceps tends to produce that condition.

In this connection I will state that no anesthetic should be administered until the patient's fears are greatly allayed, as serious consequences frequently are produced by the suggestion of fear upon the subconscious mind of the patient. This condition, where the pulse-rate sometimes exceeds 130 a minute and with the extremities rapidly becoming cold, is one requiring very close attention for a long time; and where such a condition obtains the physician should not allow himself to stray very far from this scene of emergency.

My treatment of this complication is to maintain external warmth, especially over the heart, to rub the extremities well, to inject hypodermically 1-100 grain each of atropine sulphate and glonoin, and administer every hour 1-134 grain of cactin, or of strophanthin the same amount, the latter remedy if the heart is extremely weak. Where the patient is in a comatose condition such heart remedies may be administered hypodermically. Under this treatment, as here outlined, the heart, after a few hours, resumes something not far from its normal pulse-rate. Of the remedies above referred

to, cactin is more especially adapted to the restoration of the nervous mechanism of the heart, while strophanthin is a more energetic stimulant when heroic action is needed.

Sometimes so much of the blood is determined to the internal organs that the heart has nothing to propel; so, to supply this deficiency of fluid, resort has to be made to normal saline solution to give the patient the fluid he ded.

The method of intravenous infusion is far too dangerous a procedure to be considered by the rank and file of the profession, for under ordinary conditions absolute asepsis is practically impossible; then, too, the danger of injecting air into the veins must not be lost sight of.

Hypodermoclysis into the areolar tissues of the breast is feasible, except that the solution must be boiled, and it takes some time for the solution to cool sufficiently for use. A level teaspoonful of common salt in a pint of boiling water is the solution used. When the salt solution is sufficiently cool, a trocar with cannula is thrust into the loose tissue of the breast, the trocar is removed, and the cannula attached to the tube of a fountain-syringe.

To avoid the delay here involved, small enemata into the rectum and frequently repeated have, in my experience, proved fully as satisfactory as the more slowly prepared hypodermoclysis.

As to when and when not to use forceps, that is a question for the physician in his best judgment to determine. In no case should they be used if the sole consideration is that of saving time for the physician. When, however, it is clearly evident that nature is insufficient to deliver the child, then art must come to its rescue; and in making such instrumental delivery, the physician should not wait until the patient is exhausted, but attend to it as soon as his decision is formed.

To sum up the situation: The lying-in room is no place for impatience on the part of the physician. He should stay long enough—not only till the birth of the child and of the placenta, but enough longer to ward off preventable complications. In no case should he use instruments where the sole object is to save his own time, for in

forceps deliveries there is, as I have already pointed out, increased danger from shock and hemorrhage. By gauging the screw in the forceps handle to the proper point and not exercising too tight a grip, no harm need come either to mother or child; but a little carelessness in handling the forceps can easily result in serious damage both to child and the maternal soft parts.

In brief, above all things in obstetrical practice, the physician should "stay by" long enough to do his work well.

FRANK D. PATTERSON.

Pueblo, Colo.

PUERPERAL ECLAMPSIA CURED

Having had a case of puerperal eclampsia yield beautifully to treatment, I thought that a description might benefit some of the readers of *CLINICAL MEDICINE*.

October 6, at 7 o'clock in the morning, I was called to a very sick woman. Arriving at 7:30 a. m., I learned that the patient had had six very severe convulsions, and shortly after my arrival she was seized with another severe attack, which was relieved by inhalations of chloroform. The patient was a girl seventeen years of age, primipara, and had had a normal delivery September 30. She had gotten along very nicely until October 5 (the previous day), when she began complaining of dizziness, headache, blindness at times, and spots before the eyes.

The patient's temperature now was 100° F.; pulse, 150 and bounding; skin, cyanotic; semiconscious. After the convulsion mentioned above was over, the patient was catheterized, and then given the following: Morphine sulphate, gr. 1-2, with 2 granules of veratrine, gr. 1-134 each, hypodermically. Croton oil, gtt. 2, with glycerin, gtt. 4, in capsules, was given by mouth. Also, pilocarpine hydrochloride, gr. 1-12, was given by mouth, and then the patient was placed in a hot-pack. A hot soapsud enema was given every two hours until the bowels were thoroughly cleaned out. Two hours after the first dose, the second dose of morphine sulphate (gr. 1-2) with 2 granules of veratrine (gr. 1-134) were given hypodermically. After that, morphine sulphate, gr. 1-4, and

one granule of veratrine, gr. 1-134, were ordered to be given every two hours.

On returning at 9 o'clock that evening, I found the patient conscious, resting well, and her pulse 80 and good. She had had no more convulsions; had had several good bowel movements. I had the morphine and veratrine continued throughout the night, one granule of each every three hours. The following day at 9 a. m. I found the patient fully conscious, resting nicely, with pulse 72 and regular. She had had several good bowel movements during the night. Calomel and podophyllin, of each 1 grain, were given in broken doses and these were followed by a saline laxative. The latter was repeated every day, sufficient to produce one or two good bowel movements a day.

The veratrine was kept up for twenty-four hours, one granule of gr. 1-134 every four hours. The patient was kept quiet in bed and watched closely, and given only a milk diet. Bowels, kidneys and skin were kept active, and plenty of fresh air was enjoined. After twenty-four hours the veratrine was stopped, but the saline laxative, diet, etc., were kept up for a few days. Tests showed considerable albumin in urine. Glonoin, gr. 1-250, was given every three hours. In a few days the urine cleared up.

The patient has been up for about two weeks and claims she is in good health.

CLARENCE M. YOUNG.

Corsicana, Tex.

[The eliminative measures instituted by the doctor were fine, and his intelligent use of veratrine is especially worthy of commendation. Personally we should hesitate to give so much morphine. We will discuss its use in eclampsia in a later article, and meanwhile invite the experiences of "the family."—ED.]

PRECOCIOUS PARENTAGE

In an editorial note, on page 677, *CLINICAL MEDICINE* for June, we referred to a case of childbirth reported by Dr. V. I. Pittman, in 1908, and voiced the opinion that this case formed the record for our country. In this instance a little negress became a mother when nine years and twenty-four days old.

The correspondent for China of the London *Lancet* relates a case which has created some stir among the Chinese. It prints the picture of two children and their infant child, the father being eight years old, the mother only seven. The baby was one foot in length at birth.

The Governor of Shansi, the province in which the birth took place, sent official particulars to Peking, and the correspondent himself made inquiries through a Chinese friend who lives in the neighboring city of Tai-yuan-fu. The latter reports that the facts are as stated and that the boy is the father of the child. In Taylor's "Medical Jurisprudence" we learn that a case is mentioned of a mother nine years old, but there is no record of so juvenile a father.

The fatherhood of this little Chinese chap might be difficult to establish.

ANOTHER PRECOCIOUS MOTHER—AND A CORRECTION

In the October number of *CLINICAL MEDICINE*, page 1131, there is an item from Dr. A. J. Mann of Albaton, Georgia, on precocious motherhood that is interesting, but not so very uncommon.

During the battle of Perryville, in the range of battle and on the field between the two armies, was a negro cabin, and while the battle was raging at its fiercest a slave woman gave birth to twin girl babies. The fright brought on labor three or four weeks sooner than expected.

One of those twins, when eleven years and forty-seven days old, was seated on the floor playing with dolls while her sister was in labor. I delivered the latter of a baby boy, weighing 9½ pounds, after a quick and almost painless labor not lasting two hours.

A few years thereafter I delivered another child in labor, at the age of twelve years and four months, of a very large baby boy. This was also an easy labor and quick—three hours' duration. Moral: begin young!

U. V. WILLIAMS.

Frankfort, Ky.

[This gives us an opportunity to make a correction. In Dr. Mann's article he is made to say that Mary Brown menstruated

first on June 8, 1910; it should have read June 8, 1909. Manifestly she could not menstruate four times between June 8, 1910 and July 31 of the same year!—ED.]

CARBOLIC ACID DRESSINGS DEFENDED

Much has been written cautioning against the indiscriminate use of carbolic acid because of the danger of local gangrene or systemic poisoning. It is indeed deplorable that the laity considers phenol a household remedy and the physicians themselves are to blame for the use of so powerful a drug by the uninformed.

However, I believe local gangrene usually results from a solution that is much stronger than is supposed to have been applied. The solution is made up by guess by the layman, and too often by the doctor, putting an unknown amount of water in an irregularly shaped domestic vessel and pouring the acid from a bottle. This indefinite lotion, possibly compounded in a poor light where more acid escaped from the bottle than was believed, is applied as a wet dressing to fingers or toes. The acid, if dropped into water not sufficiently warm, does not mix thoroughly; the dressing is allowed to become dry, the water is vaporized, and the phenol recrystallizes on the skin, with disastrous results.

Carbolic-acid lotion is one of the very best dressings we have for wounds of all kinds; but it should be combined with glycerin, which prevents the dressing from becoming dry and also tends to prevent the recrystallization of the acid, while assuring quick and perfect solution in the first place. The lotion should be a definite mixture. On fleshy parts of the body the acid may be used in a strength of 2 to 2 1-2 percent, with glycerin, 20 percent, dissolved in water. The carbolic acid should be measured or added by the drop, keeping in mind that 5 minims [not drops] to the ounce makes a 1-percent solution (calling the 480 minims of the ounce an even 500 minims, or 2 fluid ounces equal to 1000 minims).

Carbolized-glycerin lotion used for wet dressing to fingers, toes or ears should not be more than 1-percent in strength. A bottle of known size should always be used for

the lotion, and then, in the absence of a measure, the phenol may be dropped so that the percentage of acid in the lotion is absolutely known [except for the uncertainty of the drop, which is less than a minim.—ED.]. The glycerin may be used in any desired amount, but 20 percent is sufficient.

It is well known that hot glycerin stupes are an admirable dressing for many conditions, while carbolic acid renders the dressing both anesthetic and antiseptic. There is no other dressing that relieves soreness and swelling and prevents suppuration in incised wounds that are contaminated as does the above lotion. If one wishes to be well on the safe side for dressings of fingers and toes, use a lotion containing only 1-2 percent of carbolic acid. Even this is more antiseptic than boric-acid solution, and it is well known that the latter instead of allaying pain may increase it.

Dry dressings and powders do not allow proper drainage and often seal up matter in the wound that should be abstracted by a moist dressing by virtue of its capillary action, or poultice effect. I have seen wounds healing by first intention, without pain and swelling, when treated by a phenol-glycerin lotion, which, if dressed with boric or mercurial lotions, would have been painful and swollen, or would have suppurated under dry dressings.

J. G. WALKER.

Iola, Kan.

[This testimony of Dr. Walker is most interesting and certainly helpful. It would be a pity if so well-tried a remedy as phenolated lotion should go into oblivion because of wrong impressions spreading. This is true, also, of the full-strength phenol treatment of wounds so strenuously championed by Dr. Robert Gray and a few others. Nevertheless, caution is advisable, for the cumulative experience of practitioners cannot well be ignored.

Dr. Walker's own experience is conclusive to himself; yet, one element in the problem may have escaped his attention—maybe by mere chance—that of *time*; just as the presence of aqueous fluid has been the unknown deterrent factor in the use of strong carbolic acid on sores. Applied for a reasonable

period, weak aqueous phenol dressings cannot harm, of course; it is when these applications are uncommonly long continued (and, perhaps, the subject is specially sensitive) that they become irritant and even destructive. The reasonable explanation of this is that the carbolic acid is more readily absorbed from comparatively weak water solutions than from stronger ones or from fats—which latter can be used much stronger, a 10-percent ointment being well borne.

On the other hand, there is good authority for the statement that gangrene may occur from a 1-percent phenol solution within twenty-four hours, in twelve hours by a 2-percent solution, and in even much less time, if more concentrated. Indeed, Bergmann's "System of Surgery" speaks of the "present prevalence" of this affection, and the explanation accepted is that after destruction of the epidermis, the absorbed phenol produces thrombosis in the lymph and blood-vessels necessarily resulting in mortification of favorable tissues.

Certain danger-signs may properly be alluded to here. Itching and paresthesia, merging into anesthesia; then a dull sensation of pain; then yellowish to brownish discoloration of skin; finally, the organ becomes stiff, cold, without sensation, ending in total death of tissue.

As to the question of unreliable mixtures. Certainly much of the published testimony of surgeons is based on the employment of lotions prepared in reputable pharmacies. And here, e. g., is the pertinent statement of a personal friend, a pharmacist of high standing. At a time when this matter was hardly as yet discussed, his wife was confined with a ruptured (and sutured) perineum, and so, on general principles, the entire region was kept moist, day and night, with 1-percent phenol dressings. By and by a severe local inflammation set in, but, fortunately, the true cause was detected in time to prevent more serious damage—as later was learned from medical literature.

Furthermore, medical and pharmaceutical journals have recorded a respectable number of cases of gangrene of fingers where otherwise reliable druggists had undertaken to treat minor hand lesions with weak carbolic-acid lotions for a protracted period.

And here may be added it is the fingers and toes that are peculiarly liable to this phenol gangrene.

Another thing. Alcohol, we know, modifies the toxicity of carbolic acid. But glycerin is an alcohol, and it has the same effect in almost the same degree. Thus, without doubt, carbolic lotions containing either of these two will be decidedly more safe by comparison. And this may explain Dr. Walker's position.

One word more. Carbolic acid is not now classed with the true acids but referred to by chemists exclusively as phenol. This shorter and better term deserves more general adoption; but *never* should careful physicians speak of it as "the acid." —ED.]

HAVOC WROUGHT BY A TYPHOID-FEVER CARRIER

A circus troupe showing in Michigan in the summer of 1910 had this experience with a typhoid-fever carrier:

In the middle of the season the cook became sick and had to quit his job. This necessitated the hiring of another cook, and one was engaged on August 13, only two weeks after he had arisen from an attack of typhoid fever. His son helped him at the work, he being so weak. On August 27 the showman's son came down with the disease, and a little later two canvas-men and then two performers. On August 20 the advance agent came in to the show, and this cook got up a supper for him. Fourteen days later this man became sick with the fever. Then the show closed.

I. N. BRAINERD.

Alma, Mich.

FINDS DRUGS USELESS IN TYPHOID-FEVER

There is an epidemic of typhoid fever going on here in my field of practice. It is the kind that is self-limited, regardless of any treatment. I have used up some three thousand intestinal-antiseptic tablets but it goes right on. I have used almost every treatment that is recommended, but find *no* drug-treatment good as with drugs. I am using cold water to keep the temperature

in bounds; saline laxative or castor oil for constipation; and see to good nursing—and these patients get well in due time.

The bacillus typhosus would not, I presume, be killed in a saturated solution of sulphocarbates, or by anything that human flesh could tolerate. Bichloride of mercury or fire will promptly take the life of the germ. The germ has control of the patient till it dies out or leaves because of the shortage of food and its own filth. If this be so, then it is a matter of toleration.

I encounter a few instances of intestinal hemorrhage, and for this I find but one reliable drug, and that is gallic acid. Of all hemostatics for internal hemorrhages gallic acid is the best. Blood in the intestine is a painful hydragog, and the loss of blood and aqueous fluid is very dangerous, of course, in typhoid. Gallic acid is the remedy for both. First quiet peristalsis with morphine and atropine, then give the gallic acid in repeated doses to effect. It will not cause constipation or damage the typhoid condition. Atropine is not a hemostatic but has a favorable action on the blood-vessels. Oil of turpentine may be of some value; ergot is not of much value; lead and opium pill is uncertain; cool water on the abdomen acts reflexly; but gallic acid actually controls the blood as well as other intestinal watery losses.

I have treated three typhoid-fever patients with pneumonia complicating their condition: the alkaloids and calcidin promptly terminating these pneumonias. Pneumonia during as well as at the end of typhoid fever is very easy to control with just a few granules of calcidin.

I. N. MOYERS.

Speedwell, Tenn.

[Many tell us that when the sulphocarbates fail to control typhoid fever it is because the Lowels have not been first completely emptied. No disinfectant can penetrate a solid fecal mass, or a large bulk of semisolid matter. Has Dr. Moyers had a failure with atropine? I have advertised for reports in every medical journal in America, and got none except when a large artery was eroded, in tubercular pulmonary or typhoid intestinal ulceration. In both, a

ligature is the only possible hemostatic. If Dr. Moyer will report his failures I will gladly register them. All I want is the truth, and failures are as welcome as successes. But I want case reports, not assertions.—W. F. W.]

UMBILICAL HEMORRHAGE NOT NECESSARILY FATAL

On page 809 of the July, 1910, number of THE CLINIC, under the title of "Diagnostic and Therapeutic Helps," I notice the following: "Umbilical bleeding in infants, after the cord has fallen off, means death." This, however, is not necessarily true, as I can show from my own practice.

A year and a half ago I was called to an infant with severe hemorrhage after the cord had fallen off. After failing to control the hemorrhage with the artery-forceps, I saturated pledgets of cotton in a weak Monsel's solution of subsulphate of iron and proceeded to build an inverted cone with them, continuing the application of firm pressure, the iron preventing blood from seeping through the cotton. Then I surrounded the child's body with proper adhesive straps, so as to hold this inverted cotton cone as firmly and immovably as it could be held by hand. This dressing was renewed once, and left for a week, recovery being complete.

HERMANUS DE BOER.

Edgerton, Minn.

IMMORALITY AMONG OUR WOMEN: THE CAUSES THEREFOR, AND THE REMEDY

That immorality among our women is making forward strides to an alarming extent and that this subject will interest all who have a spark of righteousness in their hearts for better things for humanity in every way, is taken for granted, but to approach these conditions which will here be considered will require of us to have our minds so trained as to understand readily not only the needs for betterment in this direction, but the causes that are connected with this deplorable state of affairs in the world today.

Are we today in a position to judge and condemn that most unfortunate creature in the world, the fallen woman? Are our lives so clean and pure that we dare attempt to condemn others? What if the searchlight were turned upon ourselves, illuminating all the corners of our lives, throwing the searchlight upon all our thoughts and our acts of commission and omission, what would happen? What, say you, would be shown?

It seems to me that in this great question we must prepare our hearts and minds to grasp these conditions and to meet them in a spirit of helpfulness. No one can say what the conditions were that first brought about the individual downfall of many of these women. We know nothing of the prenatal conditions; we know nothing of the environment; nothing of the restriction, the restraints, the poverty, the ignorance preceding it all. We know nothing, absolutely nothing.

What we do know is that vice is among us; that it is found in every city, town and village; that it is a retrogressive force that is eating out the hearts of these women; and that, unless something is done against this tidal wave of destruction, we shall find ourselves in the depths of immorality from which we may not be able to find an outlet. If this condition of affairs continues to grow at the rate it has in the last twenty years, in ten years more it will be unsafe for us to permit our own womenfolk to walk abroad, not only at night but even in the daytime, without an escort.

We have all these things to consider in every community. There are many who do not know about the evil all around them, because they have never given it a thought; it is those who live and work among such conditions, as the Salvation Army and the settlement workers, that can say to what extent vice has grown and is gaining headway from day to day.

There are today many new types and new expressions of crime, many of which our court records do not show because of powerful influences brought to bear for the suppression of the facts, so as not to bring them into the limelight of public opinion and the possible destruction of some good name and conse-

quent ruin of business. It is the same old story: steal a loaf and you hang, but steal a million and you buy yourself freedom.

Do you know that this very day there are women in the higher walks of life, women who move in the so-called "best" society, who are guilty of unnamable crimes, so that if the light were turned on them the women in the slums and red-light districts would seem clean and almost angelic in contrast with these moral lepers, women protected by the cloak of society, but who sooner or later are sure to be found out and exposed. I wonder how many fathers and mothers know or even think of these things. And why do they not know?

Whatever menaces the purity of the life of our women, young or old, needs must be considered. That the economic conditions of today are the cause of the downfall of many of our women is indisputable, and unless these conditions are bettered, socially as well as nationally, the remedy will be as far off as ever.

It is really a great risk to educate our young women for the various vocations of life and then send them out to find for themselves positions of the proper kind and in proper surroundings. There is one thing particularly that I object to, the throwing together of the young of both sexes in offices, factories and department stores. That this indiscriminate intermingling has a degrading effect on our women can not be disputed, and the more so is this the case where the women are under the control of male superintendents and foremen. Women should be under supervision of women only. When this becomes the rule in our workshops, it will be a move in the right direction, for now only too many women are ruined by their superiors under promises of advancement, besides other reasons too numerous to mention. I know personally of numerous instances where women have confided in me, many of whom accepted the conditions and succumbed, although a small number, owing to the purity of their character, have defied their tempter, with the result, however, of losing their positions. Is it not dreadful to reflect that a premium is put upon those who are willing to sell their bodies and their souls in this manner?

This is not heresy or imagination; it is the true condition of things in our world today. Every man and woman can read between the lines in the news of the day how often these very things occur. Then, to think that not only are these women ruined socially, but that there are born into the world thousands of illegal offspring which largely become an expense and burden upon the tax-payers and others; not to mention the large numbers of abortions brought about for the purpose of getting rid of these illegal pregnancies so as to hide their shame and to save their character and social standing.

Many of those gone wrong, in spite of sad experiences, will continue in their ways and sin again and again. Why? First, because they are ruined and feel that they can never enter honorable wedlock, clean and pure as they should. Second, having tasted of the forbidden fruit and fallen, they hunger for more—which is only natural. Third, but by no means least, they are, in many instances, compelled to continue in this immorality in order to hold their positions, not having the strength to take chances in the world.

Are you so blind that you cannot see, and are you so thoughtless as not to realize what all this means? If you do not know of these things, why do you not? I know of many a young woman who went through some of the experiences, as recounted, among them especially one, a most estimable young lady who took lessons for the stage against my advice and later was engaged in a stock company of unquestionable character. This company started out from Boston and finally was stranded in some western town. In this strange place she was without friends or money, and her parents, who were my former patients, were dead. Left in this position, this young woman was ashamed to ask my assistance because I had been very much against her going on the stage, and so, instead of applying to me, she yielded to temptation and fell; and not only was she ruined in character, but she was infected by the miserable cur with a syphilitic disease. After getting back to New York City she came to me for treatment, but she will never be the same woman she was before—she is ruined for life. What an awful price

to pay for this misstep! Such a dirty scam as that seducer is only worthy of being electrocuted.

Is this terribly sickening experience not good reason why parents should be most careful as to whom they give their daughters in marriage? If I had a daughter, the man that would want her for a wife would have to give a good account of himself, and, above all, a clean bill of health from two doctors of unquestioned character.

I claim, most emphatically, that any man knowingly infecting his wife with syphilis should be sent to prison for life, for we all know that a woman infected with this disease may as well be dead, for even with the modern treatment of syphilis she will have to be under treatment, more or less, all her life, and to bear children means syphilitic children and untold misery. There should be a law making it a criminal offense for anyone, male or female, to marry if they know they are afflicted with syphilis, tuberculosis or other diseases detrimental to the wedded state; in fact, it should be made compulsory to have both parties furnish a certificate of health from their physician before a marriage license is granted.

Another thing that is detrimental to good morals is coeducation in the higher schools, for it has been proven by some of the best teachers in coeducational colleges that this system should be abolished, and this for reasons readily apparent to every man and woman of normal reasoning power. In this category also belongs the present tendency in our American families to allow their daughters unlimited freedom in going out at night and attending places of amusement unchaperoned. Many of the latter are of a morally filthy and shocking character and not fit for anybody to go to, least of all a decent young woman. It is a scandal that the moving-picture shows of today are allowed to present pictures of a nature to poison the minds of our young folks.

This state of affairs alone shows how careful one should be in allowing children, especially daughters, to go to such places, while for mothers to allow their daughters to go and come as they please is absolutely wrong. One should know just where and in what company they are, for the temptation

for evil is so strong about us that we cannot be too strict in this matter. As regards the protection of your daughter's honor, your neglecting your full duty may lead her into that undesirable company which is heedless of the danger of sin, with its moral and social ruin.

If we are to succeed in bringing about a change for the betterment of the moral conditions of the life of our women, which means their upliftment, we must first see that the masks are removed, that the light is turned on, that a purifying process is inaugurated in society, and that a helping hand is given to those who are not accepted in better-class society but are considered social outcasts.

Of those whom you would shun and be afraid to converse and be seen with there are many different types. Thus, we have the woman who in her child-life had no surroundings nor teachings to enlighten and protect her. Women of this type are often dragged and pushed into immoral doings because they know no different way. They become dissipated and indifferent, get into the habit of using baneful drugs—cocaine, morphine, chloral and the like; also they smoke cigarettes to excess (how horrible!) and ultimately wind up in the insane asylum or potter's field, forgotten; their lives wasted and empty.

The next type are those women who come from better surroundings, who have come from pleasant homes, had good parents and kind friends, and many of them reared in good society. These have been tempted in one way or another and have fallen. A few of these, after realizing their errors, repent and reform, but the majority continue in the same way and finally go down to destruction and an untimely end.

Still another class are those that have had the best of environment and refined surroundings, are highly educated and respected in society, have the best of parents, and in many cases have wealth enough to gratify their every wish in life, but who yet have drifted into an immoral life. Most of these are betrayed under various promises, often by married men; a few are led on by bad company or by promise of marriage—a promise never kept.

Just think this over you good men. Can you in your own heart condemn these women

gone wrong? I say, no. Remember, we do not know the conditions that surrounded them before they fell; they may be cursed with some hereditary taint from near or remote ancestry; in some cases the double life, lived by one or both parents may have been the cause of it all. Many of these women are dragged from the path of virtue by promises of fine positions and large pay—they are sent to some particular place, only to discover, but, alas, too late, that they were lured into a den of vice, and when once within, they seldom escape. The unsuspecting girls are trapped, their clothes are stripped from them, and they are given the gown of the harlot and forced to give themselves to a life of shame.

It was only quite recently that two women detectives were sent from New York to the Pacific Coast to investigate and find out about the agents that sell girls in New York for immoral purposes, and three or four men were arrested in New York City for trafficking in girls for houses of ill fame. That this thing has been going on for years, and that at present it is increasing, is unquestionable, for it has been estimated that thousands of girls are yearly sold into dens of vice. That some go willingly is not doubted, but many of them are deluded and forced into these places by these agents, or so-called "cadets." Whether the results of this exposure will break up this traffic in girls is to be seen. If I had it to do, these people, if found guilty, would be sent to prison for life.

How these deplorable conditions can be remedied is a profound question. The work of reforming these people is a task confronted by great obstacles and can only be done after carefully considering the various elements involved.

To go into the red-light districts of our great cities and drive out the denizens is folly, for the certain result will be the same as it was in New York some years ago. When those prostitutes were driven from their quarters, from place to place, they finally drifted into the apartment and tenement houses and the respectable residence districts, there coming in contact with pure, innocent girls, poisoning their minds, and frequently leading them on to share their

own miserable fate in a life of shame, and, as they call it, of "easy money."

That we have societies and private individuals who are doing good and are trying to reform some of these people I admit, but to do any appreciable good we must go at them with greater vigor and by different methods, varied as each case may demand. While some are willing to be helped, many of these unfortunates do not and will not change their mode of life—the life of the prostitute—for something better and purer.

For the latter kind something else must be done. To try to reform those that will not be reformed is a waste of time and money, so that the only thing left is to restrict them to a circumscribed part of the town where they can be found by those who so desire, making it an offense punishable by fine and imprisonment if they are found outside their limits. This must be made a state law. Moreover, this whole matter should be taken out of the hands of the police department and the low politicians who for years have been bleeding these unfortunates to the extent of unnumbered thousands of dollars, enriching themselves with this blood-money.

These women should be under the supervision of the city physician and should be examined at frequent intervals. This to avoid the spread of venereal diseases as much as possible. To condemn these people is not of the spirit of that great reformer Jesus Christ, who said, "Let him who is without sin among you cast the first stone." To stop prostitution is utterly impossible. You cannot stop it any more than you can stop the sun from shining—no power on earth can stop it. But it is the duty of every honest man and woman to try to get this evil regulated so that these women may not go about contaminating the innocent, while they also should work for the improvement of all places where the still pure may be tempted, such as offices, factories, department stores, and all places where men and women work side by side. That thousands of girls are brought to their downfall in such places and under such conditions is a positive fact. Anyone who could bring about a betterment of this condition would be immortalized.

One thing is certain, prostitution among our women will not down by force. It must be overcome by kindness and by the extension of a willing and helping hand, aiding them in all possible ways to overcome this passion for evil for one of goodness and purity. And if our men of wealth would only spend some of their money in this direction, it would be more glorious for them than to build churches that too often invite only the rich while ostracizing the lowly and lonely.

What we need is men and women of broad and liberal minds, who are disgusted with the condition of things as they are, those who will get out and work royally and unselfishly for the upliftment of these women and try to save those that are willing to be saved from destruction and untimely death, bringing them to realize what they are doing and the dire results their mode of life will bring them. Those who are willing to put their hearts into this work and can learn to do it well will some time be immortalized.

That this subject is not new I am well aware, but as this condition of things is getting the upper hand, it must be fought vigorously, and brought to the notice of fathers and mothers, and the public above all; and our legislatures must compel the latter to do something for the abatement of this most degrading and soul-destroying vice—the social evil.

W. F. RADUE.

Union Hill, N. J.

[In the main we agree with Dr. Radue. The subject which he discusses is one of vital interest, and there can be little question that there is an increase of moral laxity, both among men and women. The problem is not one that concerns either sex alone, and in our opinion it is not one that can be solved by segregating the young women from the young men, as he so warmly advocates. The association of the two sexes is perfectly natural in the home, in social and business intercourse, in the church, and in most schools. To set one sex apart from the other, in defiance of the laws of nature and in quasi-ignorance, is but to put a premium upon the secret relationship which too easily becomes illicit.

No, what we need is not segregation, it is knowledge—sex education—and the instilling of high moral standards. The young women (and young men) who go astray do so either because they are sexually ignorant or because they are morally weak. It is a pity that the prudery of the age and the foolish laws which make teaching through the press dangerous prevent an open, free uncovering of sexual immorality, its tendencies and dangers, in the public press. Every doctor should be a teacher, and every public-school teacher should be in a position to tell the truth to his or her pupils concerning the nature of the relationship between the sexes and the disease and degradation that neglect of the moral law involves. Neither man nor woman *should* be afraid for his or her children, boys or girls, to enter the world of business or society for fear of contamination—nor need he fear if they have been wisely taught, soundly grounded in morals, and brought to feel the dignity of honest toil.

Much is said about the economic causes of prostitution—much that is true, much that is not true. Girls most often go astray, I believe, rather because they wish to avoid work that they believe “beneath” their station than from real fear of starvation. There is a demand for women to do housework that would give healthful, honest and well-remunerated employment to thousands and thousands. Why does the “submerged” young woman choose to be the mistress of a villain, as did that young actress, rather than to do honest work with her hands? I tell you, brethren, the rungs of the social ladder are too often a succession of lies about life.

Tell the young men and young women the absolute truth about sexual life. Let in the light. Let them know that “the wages of sin is death.” This is a work that we of the medical profession should be doing.—ED.]

MORE ABOUT THE “CRIME OF SEXUAL IGNORANCE”

We hasten to endorse heartily the article on “The Crime of Sexual Ignorance,” by Dr. Standard, appearing in *THE CLINIC* for November, 1910. We have preferred a village and country practice for the reason

that here we should not have to treat so many cases of disease and troubles caused by unlawful sexual indulgence. We have been very severe with the wilful sinner and have driven most of them to other doctors.

Last month (September) we had the most revolting case that has come under our care in twenty years of general practice. A man past thirty years of age, who had been considering it his lawful privilege to indulge wherever he could find a victim, became inoculated with syphilis. After getting away from the doctor's care and before going to work he went to visit in a farmer's family for a few days. An ignorant and innocent girl of eighteen years was taken advantage of during this time and every part that his diseased organ touched, from the entrance of the vagina to the body of the womb, was covered with the foulest syphilitic ulcers. The intercourse occurred on the 1st of September, and the ulcers started on the 21st. The girl was brought to us for treatment the 25th.

The girl claimed that her parents never had cautioned her to be careful with boys and men or taught her the danger and sinfulness of fornication. She said her minister never to her knowledge preached a sermon warning young people of the dangers of indulgence before marriage.

It is a disgrace to the medical profession as well as the clergy, our present state of society in matters of sexual knowledge. We need a society or organization formed and supported by correspondence to wake up the people on this point. We ourselves will make a first subscription for its work of \$50 to be paid as soon as such an organization is in working order.

The first work of such a body ought to be to bring the clergy to their senses. Ezekiel, 33, 8, says to the servants of God: “If thou dost not speak to warn the wicked from his way, that wicked man shall die in his iniquity; but his blood will I require at thine hand.” Every clergyman of every sect takes a vow to do this faithfully when he is consecrated to the work. Paul says in Galatians, 5, 19 and 21: “Now the works of the flesh are manifest, which are these, adultery, fornication, uncleanness, lasciviousness, I have told you in times past, that

they which do such things shall not inherit the kingdom of God."

It is immaterial what interpretation is put upon this quotation from the Book, short of a straight contradiction of it, the warning of the parents and children ought to wake them up. In Hebrews, 10, 26 and 27, he again says that if you commit these sins after you are fully aware of the consequences of them, there is nothing to do but to look forward to the judgment and the fiery indignation which is sure to come. Christ is reported to have said (Matthew 5 : 28), "Who-soever looketh on a woman to lust after her hath committed adultery with her already in his heart."

A leaflet from such an organization of doctors, supported by many of the profession, as it surely will be, would make a wonderful stirring among the dry bones. Let those kick or refuse who dare, either among the clergy, parents or young people, and we will leave them to the awful punishment which awaits them.

We will then go to the medical societies, boards of health, legislatures, and the national congress for laws to quarantine the sexual diseases and to provide suitable punishment for those responsible for the spread of the disease, even to the unsexing of the offenders.

It is a notorious fact, that all know, that our lawmakers and those who should enforce law are terribly rotten in the matter of unlawful sexual relations. An enlightened public opinion must send pure men to make and enforce laws for us.

We have several times before seen articles like Dr. Standard's published in medical journals, but nothing has been accomplished through them. We join in the question, "Shall we longer delay in shouldering our responsibilities in this matter of arousing the nation to a sense of danger?"

C. W. McDADE.

MARV K. McDADE.

Bellingham, Minn.

[While there is no organization which we know that covers the exact field suggested by the Drs. McDade, it is evident there is room for one. The first thing, the most important, is to know our problem—to study

it from every angle. Knowing it, we shall be better prepared to propose a remedy or remedies.

Candidly I do not believe that we are ever going to crush out the sexual diseases by enacting laws which wreak the vengeance of society upon the sufferer. We must tell the truth about these diseases, tell it to young women and young men, so that if they err, they will do so with their eyes open. Ignorance and poverty are probably more important factors in the propagation of syphilis and gonorrhea than passion—though this must be reckoned with.

In this connection I want to urge every reader of CLINICAL MEDICINE to become a member of the newly organized American Society of Medical Sociology. This society will investigate such questions as marriage and divorce, abortion and the prevention of conception, prostitution, venereal infection and the means of preventing it, and the economic causes of such diseases as cancer and tuberculosis. The results of these investigations will be disseminated by means of public meetings, lectures, reports, pamphlets, etc.

It seems to us that such an organization can best do a certain class of work, a work which must be done, and done in a broad, fair and absolutely impartial spirit, before we can thoroughly understand and therefore wisely treat the great social-economic evils of society, in which the medical profession should be most interested because better than any other it understands them and sees their results.

The Honorary President of this society is Dr. A. Jacobi, New York; the President is Dr. W. J. Robinson, the well-known editor of *The Critic and Guide*. Send \$2.00 for membership to the American Society of Medical Sociology, 12 Mt. Morris Park W., New York City. Ten dollars for life membership.—ED.]

FOR THE SPARE MOMENTS

While the holiday season is well-nigh past it is not too late to get a copy of the little book, "Backbone." This is something that the doctor and all his friends can enjoy the whole year round. It is filled

with short inspirational talks by Dr. Abbott, Dr. Waugh, Dr. Lanphear, Dr. Burdick, Dr. Lydston and others. There are poems that boost and encourage, and clever sayings and wise epigrams. Dr. George F. Butler prepared the Introduction, and the whole book, as arranged by S. De Witt Clough, is a veritable "Antidote for the Blues and a Straight-ahead Sure Cure for the Grouch." The price, in art paper binding, is 50 cents; in crush leather *de luxe*, \$1.00.

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We wish to call special attention to the advertising section of this number of *CLINICAL MEDICINE*. There are 102 pages in this part of the journal; which, we believe, sets a new record in medical journalism.

We congratulate ourselves not only on account of the quantity of advertising carried but also upon its quality. We have rejected thousands of dollars' worth of "copy" from concerns of doubtful character or about whose products there might be the slightest doubt. You can read what remains with confidence that you will get a "square deal," though, of course, we cannot pledge ourselves that what you buy from our advertisers will always please you.

It pays to read the advertising pages. Practically everything medically new or useful for the medical man is represented within these 102 pages. You can hardly make yourself familiar with the progress in the art of healing unless you investigate

the offerings of our advertisers closely. When answering advertisements you will accommodate the advertiser, as well as ourselves, by mentioning *CLINICAL MEDICINE*.

FINDS THE BOUND "CLINICAL MEDICINE" A VALUABLE REFERENCE LIBRARY

CLINICAL MEDICINE is a great help to me. I bind it myself, in a crude way, by using bailing wire. At the end of each year I take off the advertising pages, punch two holes in each journal, string the twelve numbers of a volume on to the wire bent in the shape of a staple, and then bend it around tightly and twist the ends together with pliers. This binds the volume as securely as if done by a bookbinder.

By making note of all the good articles in my index-book [or card-index.—ED.] I can refer to anything bearing on any subject in a few minutes. This system makes my journals [valuable reference-books for me.

JOHN. H. FERGUSON,
Colorado Springs, Colo.

SUCCESS WITH DEFINITE THERAPY IN MONTANA

During the past fall there has been a great prevalence of typhoid fever in almost all parts of Montana and with a rather high mortality, judging by newspaper reports. Here in my own community the water supply comes from shallow wells which receive some surface drainage. Thus far there have occurred four true cases, one of the walking variety. Three of these recovered inside of ten days, the fourth showed an elevated temperature until the twentieth day, but the attack was a very mild one. My treatment for these was entirely along alkaloidal lines, and with which I have had great success.

During three years' practice in a large southern city all my cases of typhoid fever under the old treatment ran a long course, with all the usual complications, but now it is different. I clean out with calomel and laxative salines, then push the sulphocarbolates, giving 5 grains every hour or two

until effect, then every two or three hours to keep up effect. The fever I reduce with tepid bathing, using the tub when possible. The diet consists of raw egg-white, beef juice, gelatin dishes, and grape juice. I allow no milk and only occasionally ice cream. On this diet I never have had any dangerous tympany. So much for typhoid fever.

In scarlet fever the alkaloidal treatment cannot be equaled. I have treated fifteen or twenty cases since locating here, without a single death, and I came here in the midst of an epidemic in which there had occurred two deaths. My treatment consists in giving calomel, saline laxatives, aconitine and calcium sulphide, greasing with carbolized vaseline and putting on a liquid diet. Under this treatment, the old ladies (who know everything) said it surely could not have been scarlet fever. But it was. Quarantine and fumigation were rigid.

I also wish to report two cases of habitual abortion occurring in different women, both of whom I curetted under hyoscine-morphine anesthesia, with a very little chloroform. In neither case was there any nausea. In these cases, with chloroform alone, I have always had extreme nausea. I use the hyoscine-morphine-cactin combination often now instead of chloroform or ether.

The foregoing are a few of my successes with the active principles, but I wish to add that in several cases of rigid os I have used caulophyllin without any noticeable effect. I administered it in 1-6 grain doses every half hour in hot water. So also emetin has failed to produce any results in my hands as an expectorant.

F. E. McCANN.

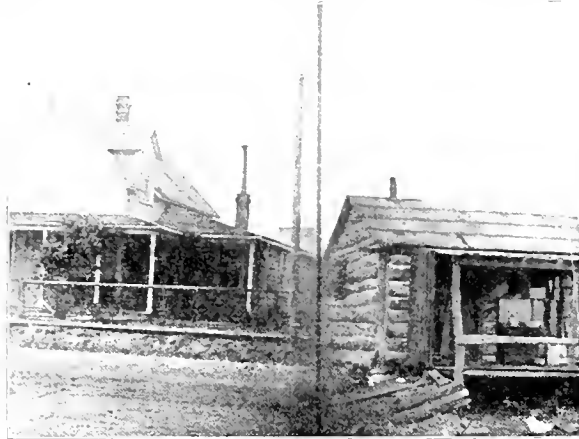
Augusta, Mont.

[Dr. McCann's success in applying rational treatment in fevers is typical. His want of success with caulophyllin and emetin is due to failure to push the doses to effect. Try again, giving the former every ten minutes, emetin every ten till nausea. The picture on this page shows how rapidly

the pioneer stage is passing in the Great West.—Ed.]

TWO GOOD NUMBERS OF TWO GOOD JOURNALS

At the risk of getting ourselves "in bad" with two excellent friends we are going to



Town house on the left and the old homestead cabin on the right. Dr. F. E. McCann, Augusta, Mont.

risk saying something nice about two fine journals in the same article. The two journals are *The Interstate Medical Journal* and *The American Journal of Surgery*, the former published in St. Louis, the latter in New York. The January number of each is a "special."

The "Special Southern Number" of *The American Journal of Surgery* will consist entirely of original articles by southern surgeons. Among those contributing are Dr. Howard A. Kelly of Baltimore, Dr. J. Shelton Horsley of Richmond, Dr. Willis F. Westmoreland of Atlanta, Dr. Southgate Leigh of Norfolk, Dr. George R. White of Richmond, Dr. Louis Frank of Louisville, Dr. Stuart McGuire of Richmond, and others.

The "Special Syphilis Number" of *The Interstate Medical Journal* will consist entirely of articles upon syphilis and closely allied subjects, and will give much space to the discussion of Ehrlich's new remedy, "606." Among the contributors are Dr. William Osler of Oxford University, Dr. Hidego Noguchi, New York, Dr. J. S. Cohn, Chicago, Dr. L. H. Marks, Frankfort-on-

Main, Dr. H. Hollepeau, Paris, Dr. Robert H. Babcock, Chicago, Dr. B. C. Corbus, Chicago, Dr. A. Ravogli, Cincinnati, Dr. Isadore Dyer, New Orleans, and others.

From such an array of talent it needs no argument to prove that independent medical journalism is in a very lively condition. Incidentally, we are (privately) quite well pleased with this number of *CLINICAL MEDICINE*. What do *you* think of it?

BRYONIN IN AFFECTIONS OF THE SEROUS MEMBRANES

I have just come into the possession of a copy of Radue's "Diseases of Children," and I find this book a most valuable little guide, the feature of dosage appealing strongly to me. However, in my judgment, sufficient prominence has not been given to the use of bryonin, by the author, who recommends it for cases of acute pericarditis after the subsidence of the more acute symptoms.

Bearing in mind the selection of bryonin for inflammations of the serous membranes, it is plain that this drug is just as serviceable in the *first* stage of acute pericarditis, and no less so in pleurisy, peritonitis, acute rheumatism and meningitis. Besides, I have found bryonin useful in acute congestion of the liver, acute bronchitis and acute follicular tonsillitis. Many claim that it has a tendency to keep the effusions in pleurisy and peritonitis serous in character, and also to promote their absorption.

Another "key-note" for its use with many practitioners is a spiteful disposition during illness.

Dr. Radue properly has given great prominence in his book to the "clearing out and cleaning up" procedure, not forgetting the "keeping clean" by the use of sulphocarbolates, and the free use of calcium sulphide to produce systemic asepsis. I certainly most cheerfully commend the work to the careful consideration of the profession.

HORACE R. POWELL.

Poughkeepsie, N. Y.

[A well-deserved tribute. We hope that Dr. Powell's words may stimulate many members of the "family" to purchase the

book, whose price is only \$1.00. We shall be glad to supply it.—ED.]

ELATERIN IN ACUTE UREMIA

As I have never written you before in regard to my experience with the active principles, but now wish to report a case of acute uremia successfully treated by me. Patient, young lady, single. When I first saw her, at about 10 o'clock in the evening, her eyes were swollen shut, she was almost totally blind, delirious, had muscular twitchings all over the body. There was complete anuria; in fact, convulsions were liable to occur at any moment.

Something had to be done, and that quickly. Therefore I first administered a hypodermic of morphine and hyoscine, and then gave a granule of elaterin, 1-6 grain, but it was swallowed with difficulty. Next I prepared a tub of hot water and heated a soft-coal stove (as this was eight miles out in the country) till the room was very hot. By this time the patient gave evidence that her bowels were about to act. When assisted on the vessel she had a free evacuation but voided no urine. This was about one hour after giving the elaterin. She soon began to vomit, this due, presumably, to the toxemia and the irritation of the elaterin. As soon as the nausea would permit, I gave another elaterin granule, then we sat her upright in the tub of warm water and supported her, although she was faint until the sweat was pouring out all over her—actually, the sweat ran down her face in droplets.

After that it was wonderful, indeed, how her mental and eliminative functions began to improve. Her bowels moved about every half hour during the entire night while the next day she began to excrete a small amount of urine containing blood-cells and casts galore. The following day she was put through the sweating bath twice and her bowels were kept very active with magnesium sulphate. Her final recovery was uneventful under the usual treatment of Basham's mixture and a milk diet.

The point I wish to emphasize in this case is the prompt and powerful action of the elaterin and the way it produced elimination to unload the terribly engorged kidneys.

Brothers, let me give you this pointer—never allow your buggy-case to be without a few granules of elaterin.

J. A. PRINGLE.

Bagley, Ia.

PILOCARPINE AS AN ADJUNCT

Beside the ordinary uses of pilocarpine, I find it is a useful remedy to combine with expectorants, such as codeine and emetin, since in small doses it aids the action of the latter upon the bronchial tubes, assisting greatly in loosening up the secretion in these parts. With asclepidin, given with hot water, its action is directed to the skin; it also greatly aids the value of diaphoretics in cases of fever with dry, hot skin. With eupatorin and barosmin and similar agents, in small doses, with large quantities of water, its action is directed to the kidneys, the diuretic action of these remedies being greatly increased. Combined with emmenagoges, chologogs, sialogogs, etc., it will enhance their value.

Pilocarpine seems not only to open up the way for various remedies, but when combined with other remedies in suitable doses its action is somewhat directed and it greatly enhances their value. When used for this purpose, the dose should be small, yet not in such minute quantities as to be homeopathic, which would make it contraindicated for the very condition for which it was being used.

J. A. BURNETT.

Paw Paw, Okla.

[Is not the "directing" action noted by Dr. Burnett due to the fact that pilocarpine is one of our best (if not our very best) stimulants of glandular activity? It stimulates the sudorific glands, the salivary glands, the gastric glands, the intestinal glands, the lachrymal glands, and the glands of the nose, throat and deeper respiratory passages. It acts upon the minute terminal secretory nerve-fibrils. Furthermore, pilocarpine is a stimulant of leukocytosis. It is admirably fitted for use as an adjuvant in the conditions mentioned by Dr. Burnett—and used alone it has a field of activity whose importance is not half appreciated. For

instance, have you ever used pilocarpine in sthenic cases of erysipelas?—Ed.]

VALUE OF VIBRATORY MASSAGE IN VARIOUS PAINFUL AFFECTIONS

I have just received the September copy of CLINICAL MEDICINE and I am delighted with it. It is the most helpful medical magazine that comes to my desk, and I like it especially for the spirit of therapeutic optimism that pervades every number; moreover, it is growing better all the time. Your editorial asking for contributions to the October "experience" number has stirred me up to try and do my part.

I do not remember ever seeing much of anything said in THE CLINIC about vibratory massage as an aid in therapeutics, except in connection with your Postgraduate Course; so, inasmuch as I have had some gratifying experience along that line I will give the "family" the benefit of it.

About three years ago I secured a Shelton portable vibrator, and I can say that no other single article of my office equipment has been so profitable as an investment and as a means of relieving pain and helping patients back to health and to their work. Whenever a patient comes into my office with a stiff neck, a sprained back or sprained muscle in any part of his body, with backache, lumbago, sciatica or headache, I no longer prescribe a liniment or opiate, but I simply get right to work with my vibrator, knowing that the pain will disappear as if by magic within five minutes—and a person who came into my office unable to turn his head or straighten his back will go out feeling as limber as the best and looking as surprised and happy as if he had just received news of a big legacy. Incidentally, he will gladly hand me two or three dollars in place of the usual fee of one dollar for a piece of paper calling for some kind of liniment to be had at the drugstore for another dollar. Of course, I very seldom fail to supply him with some medicine to flush his sewer and thereby clinch the cure so well begun.

I remember very well the first patient on whom I used my vibrator. He was a brakeman on an ore-train who had sprained the muscles of his thigh by making a misstep in

jumping from one car to another. He had been injured about a week before and still was barely able to get around with the aid of crutches, and he was so badly crippled that I felt at a loss to know what to do for the poor fellow. Having to do something, and more as an experiment, I decided to use the vibrator on him, and being a novice in handling the machine, I did not treat him really as thoroughly and correctly as I should do now. Nevertheless the man felt decidedly better after the first treatment; in three days he discarded one of his crutches, after the fifth day he walked without any, and in less than ten days was back again at his arduous work.

One of my recent cases was that of an Englishman whose knee had been dislocated at football. It was pulled back into place right away by his fellow players and he was able to walk to the street car, but twenty-four hours later the joint was so badly swollen and painful that it was impossible to bend it. A similar accident had happened to the same knee several years before, so that there was great danger of a chronic synovitis. Results in this case were very gratifying indeed, vibratory massage and rest being the only treatment, barring the application of arnica the first day, and tincture of iodine daily the first week. The pain was much less after the first treatment, the swelling diminished from day to day, and the patient was able to walk with the aid of a cane after one week. A month after the accident the swelling had disappeared and the patient walked with only a slight limp.

At the present writing I am treating a man who fell a distance of twenty feet in a mine shaft, landing on his hands and knees, but on whose back there fell a heavy board and a compressed-air drilling machine, so that it was a marvel that he escaped without a broken back or fracture of some sort. The twelfth dorsal vertebra was slightly displaced backward, but no symptoms of paralysis have made their appearance thus far. As I am not an osteopath I have not ventured to push the vertebra back into place. (I know of an osteopath who caused the fracture of a dorsal vertebra in the case of a prominent business man here by placing his knee on the spinal column and pulling

the patient forcibly back by the shoulders. Doctors here and in El Paso diagnosed the condition as typhoid spine, until an x-ray picture, taken in Germany, disclosed the fracture, and then careful questioning elicited the story of the interference on the part of the osteopath, but which the patient had neglected to mention. But I am digressing.) Vibration along the spinal column of this, my latest, patient is producing the usual gratifying results. The pain disappeared after three treatments, while after the very first treatment the man was able to straighten up his back, stoop over and pick up his cane, and finally to walk off without using it.

A doctor who is equipped with a good knowledge of anatomy—as all of us should be—and with a good vibrator—even if only a small portable one—can accomplish nearly everything that a professional masseur or an osteopath can do (and never do the harm the latter sometimes causes); but even if he or his patient should prefer manual manipulation, it may not be available, and in that case the vibrator proves a most acceptable substitute.

HOWARD DEMAREST EATON.

Chihuahua, Mex.

A NEW TEST

Some days ago we had the pleasure of hearing Mr. A. F. Walker give the graduating address to the class of corsetaires of the H. W. Gossard Company, of this city. (A corsetaire, we would add for the instruction of our readers, is a lady whose profession it is to fit corsets, artistically and anatomically, and, as a mere incident—to sell them.)

Mr. Walker is an enthusiast. In the course of his exceedingly interesting talk he remarked that, after death, even though she learned to balance herself gracefully on a cloud and mastered the technic and repertoire of the Golden Harp, no lady could feel assured of a cordial welcome into heaven's best society unless she wore a Gossard corset.

Doubtless Mr. Walker has advance information. Anyhow, the corset "aforementioned," when properly fitted by one of the class, seems the most admirably adapted to support the sagging abdomens

of womankind of anything we have seen. We honestly believe that thousands of women would be better in health, as well as more attractive in figure, through wearing one of them.

OUR FAILURES—ONE OF PLACENTA PRÆVIA

Quite frequently we read of the brilliant achievements of our fellow practitioners in the management of difficult cases in the various fields of medical endeavor, but from some egotistical standpoint we are "professionally" silent regarding those cases in which our results have not been as we might wish. Our failures, if depicted at the right time, may be the means of preventing some, as unfortunate as ourselves, from delaying radical treatment, and lead to trying plans of procedure other than the old-time methods. The many textbooks that treat of placenta prævia are filled with statistics relative to its frequency, variety, etc., but shed little light on the management of such cases, except in a very limited way.

There seems to be a great deal of difference of opinion among the many authors relative to the frequency, variety, etc., of placenta prævia. Mueller states that in 876,432 labors placenta prævia occurred once in 1078 cases; Lomer and Farneir estimate its incidence to be once in 723 and 207 cases respectively. Williams estimates it to be one in 1000 cases seen in private, as compared with one in 250 cases in hospital practice.

The frequency of the different varieties seems to bring forth quite an array of statistics equally as diversified. Koblanck and Strassman observed the central placenta prævia in .84 and 23.8 percent, lateral in 64.5 and 61.5 percent, marginal in 17.1 and 15.2 percent. Pinard found the marginal to be the most frequent, basing his figures upon the "vicious insertion" of some writers, finding this condition present in 28.12 percent. Williams, commenting upon these figures, states that his (Pinard's) calculations are not above reproach, as he bases his figures upon the measurement of the distance of the margin of the placenta from the point of rupture of the membranes, as determined from examination of the afterbirth. This

would no doubt be a source of error, for if all of the so-called "vicious insertions" were tabulated as marginal placenta prævia, the number of cases in private practice would be materially increased, for then all low insertions of the placenta could be called placenta prævia, a condition quite frequently met with.

I have met with quite a number of complications during confinement, but the following case of placenta prævia proved to be one of the most difficult that I have ever encountered.

Mrs. B., age 32, mother of six children; all born at full term, labor easy, hemorrhage insignificant, children strong and vigorous at birth and convalescence uninterrupted. Her married life extended over a period of ten years, the births of her children having intervals of fifteen months to two years. Her family history was negative. I saw the patient on the morning of April 21, about 9 a. m. She was about eight and one-half months pregnant and gave a history of more or less "flooding" during the past two months, with occasional vague pains low down in the abdomen.

The last hemorrhage, occurring three days previous to the time I saw her, was of sufficient quantity to alarm her, and her husband came to town and was given atropine, strychnine and morphine for her, and was cautioned to keep her quiet in bed and to report if the hemorrhage continued. I heard nothing more from her until three days later, when her husband reported that the hemorrhage had begun again.

Upon examination I found the patient to be of small stature, with flabby muscles, pale and anemic, tongue coated, breath offensive, temperature normal, pulse 80. She was having some slight pains, low down in the abdomen, but not of a "bearing-down" character. I was unable, by external examination, to make out definitely the position of the child, excepting that it was a head presentation. Fetal heart sounds and movements were weak. Vaginal examination revealed a rather small pelvis. After removing several large clots of blood I was able to palpate a large boggy mass situated at the os, seemingly attached to the right side of the cervix. This mass protruded about an inch into the vagina and was about three

fingers' breadth in width; protrusions from this seemed to extend across the os so that it was with difficulty that the degree of dilation was made out.

A diagnosis of placenta prævia was made. The vagina was tightly packed with sterile gauze and the patient was put on a solution of atropine, nuclein and strychnine. She was also given small doses of quinine, with the hope of stimulating labor pains. I saw her about four hours later in consultation. We found her with a pulse of 120, very weak, hemorrhage profuse whenever she changed position in bed and upon examination. Pains were weak and not of a "bearing-down" character.

After removing the packing I took out several large clots of blood, thoroughly irrigated the vagina with hot water, and found the degree of dilation to be about the same as at the prior examination. After reviewing the case we decided that the only course left open to us was to induce labor and deliver as speedily as possible. After making several attempts we succeeded in dilating the cervix sufficiently to rupture the membranes, but in so doing had to break through the overlapping placenta, which brought on a frightful hemorrhage; it was utterly impossible for either of us to grasp a foot and do version, so we decided that the only thing to do under the existing conditions was to make an attempt to put on long-bladed forceps and bring the head down low enough in the pelvis to make pressure upon the placenta and possibly stop the excessive hemorrhage.

After several attempts we succeeded in doing this and the hemorrhage was materially lessened. The head was brought well down into the pelvis, and after a wait of ten minutes the baby was delivered with very little difficulty. In bringing the head down it was turned from a left occiput anterior position to a right occiput anterior position. In doing this we had hoped that the occiput would bring to bear more pressure than the face upon the protruding placenta. The placenta was easily delivered and with very little hemorrhage, uterine contractions being good.

The patient by this time was suffering greatly from shock, so she was surrounded with hot irons, warm blankets and given

hypodermics of strychnine, atropine, ergotin, and hot salt solution was thrown in the bowel. Ergotin was repeated in half hour, but uterine contractions being good and hemorrhage having ceased it was discontinued. A general stimulating treatment was instituted in order to overcome shock, but nine hours after delivery she died without ever having rallied from the excessive loss of blood. The baby did not show any signs of life.

The placenta showed nothing of importance. It appeared healthy in every respect, excepting the protrusion that had extended across the os and into the vagina, which was rather congested and seemed to have been torn loose from the main portion of the placenta. During the time of and before delivery she was given hypodermics of strychnine, atropine, digitalin and quinine by the mouth and glonoïn on the tongue.

There are several things, so the popular textbooks tell us, that we might have done under these conditions, but for some reason we were unable to do them. For instance the cervix might have been dilated more rapidly; we shouldn't have experienced any difficulty in grasping a foot, but we considered ourselves fortunate in getting the head down low enough to control the hemorrhage without wasting time trying to grasp a foot and do version. Then, our efforts to overcome shock might have been attended with better success—but unfortunately they were not.

In contributing this failure to CLINICAL MEDICINE I do so with the hope of stirring up friendly criticism and that the other fellow will give me the "dope" on what he would do if placed in a similar position.

R. K. OGILVIE.

Blodgett, Mo.

DR. DAY'S MINERAL TREATMENT OF TUBERCULOSIS

I myself have great success in the treatment of tuberculosis. For years I have been using what I call the mineral treatment: gold, copper, iodine and arsenic, but principally arsenic, saturating the whole system with it, together with a great deal of strychnine and the triple arsenates with nuclein.

I believe I can show more decided results than even follow crotalin, from what I have learned of it.

I am glad to find in your journal several reports of different treatments for tuberculosis that corroborate my own method, especially those of Dr. Flick of Pennsylvania, and of Professor Robin of France. Still, I am anxious to try in a few cases some of the crotalin as I am treating over fifty cases now. I think the fresh-air fad (and no other treatment) is pretty well played out, after the sad experience with it in the last hundred years.

J. W. DAY.

Rochester, N. Y.

[The use of copper, iodine and arsenic is far from new, and is generally accepted as proper today; the popularity of gold for the treatment of consumption, as of any disease, was but short-lived, and Hare, for example, has not seen any results from its use.

Your free use of strychnine and the triple arsenates is excellent if combined with the proper remedies to secure elimination and with the approved hygienic and dietetic measures. We are strongly of the opinion that the nuclein you are giving would do better work if it were administered in large doses (30 to 60 drops, three times daily) and on an empty stomach.—ED.]

DEATHS IN CHILD-BIRTH

Dr. Frederick S. Crum, assistant statistician of the Prudential Insurance Company of America, presents an interesting and important study of the above subject in *The Medical Record* for Sept. 17, 1910. Proper statistics not being available for our own country, the author has studied those of New South Wales, where such data have been registered and compiled for a period of thirteen years—1893—1905. These are of special value because they indicate the varying fatality ratios according to the number, if any, of the previous confinements.

It appears from a study of more than 450,000 confinements presented that the risk of death at the first confinement is higher than at any subsequent one up to the

eighth. It is least at the second, but not much higher at the third. The risk of death steadily increases with the advancing age of the mother.

The average fatality ratio of first confinements is shown to have been 6.0 for all married women in Western Australia during five years, 1903—'07, for which the information is available. The chances of death during confinement of mothers without previous issue increase steadily with advancing age, and the ratio of deaths to 1000 confinements varied from 4.4 for mothers under twenty to 13.2 for mothers of ages forty to forty-four.

While it is not possible to state what proportion of confinement-cases in the United States, or in any state, or in any given city, are likely to prove fatal, it would seem reasonable to assume, that the ratio for all married mothers would vary from 4 or 5 to 10 or 15 per 1000 of all cases. The variation in the ratios would depend upon the average age of mothers and especially upon the proportion of the total confinements which were first confinements. Taken one with another, it is probably not far from the truth to assert that from 5 to 10 confinements out of every 1000 are fatal to the mothers in this country at the present time.

DIAGNOSTIC AND THERAPEUTIC HELPS

Ulcer of the stomach is very rare in children. Similar symptoms are produced by tapeworm.

If a child holds the head to one side and complains of angina, it has a swollen gland.

A chronic cough and irregular fever in children without objective symptoms is always a suspicious condition.

The absence of objective symptoms in children with irritative cough, especially if there is a scrofulous tendency, means tuberculosis of the bronchial gland.

If male-fern has been given in large doses for tapeworm, don't give an oil after it as a cathartic. Oil promotes the absorption of the male-fern and thereby might cause poisoning.

Don't use belladonna preparations near meal-time. They may decrease gastric secretion.

Headache on the top of the head and back of the neck may be relieved by treating the uterus locally and giving bromides internally.

For the headache from eyestrain try atropine or potassium bromide.

If it is impossible to apply local treatment to the pharynx and larynx on account of severe gagging, give a large dose of potassium bromide, which will depress reflex action and may also remove pain and hoarseness.

If bromides in small doses cause acne, add arsenic and the intestinal antiseptic, the combined sulphocarbolates.

If a child, convalescent from scarlatina, gets fever again, examine the ear, urine, and wrist.

If a child without fever suddenly becomes hemiplegic, think of trauma, embolism, syphilis.

If a child that is very small for its age feels freezy on hot days and is constipated, it suffers from myxedema.

Always, in a rachitic child that is very small for its age, think first of myxedema.

Exanthemata on hand and foot of a child are due to syphilis or scabies.

In an infant that cries much and will not sleep nights, but does not show anything abnormal except a very strong-smelling urine, think of rickets.

Do not give buchu in acute cystitis.

The continuous use of strong coffee may cause biliousness.

A cup of hot strong coffee may relieve an attack of asthma.

In all cases of suppuration and germ disease use calcium sulphide to saturation.

Every man is as old as are his arteries and bowels. Keep them right.

In disorders of compensation be careful with your diagnosis of valvular disease or nephritis.

Before putting a sound into the uterus, for any reason, find out the time of the last menses.

For headache of the menopause give canab's indica, and relieve the constipation and anemia, if present.

Incontinence of urine in females, when coughing, sneezing, or laughing, may be relieved by cantharis.

Cantharidal blisters may cause acute nephritis.

Before applying a fly-blister, moisten the skin with vinegar.

Capsicum plaster is a useful local application in lumbago and rheumatism.

Unbroken chilblains are benefited by painting with tincture of capsicum and by the internal administration of lime salts.

If a patient shows symptoms of cancer of the liver without dyspeptic disturbances, examine the urine for sugar.

If an ulcer of the larynx first improves under the application of lactic acid, without entirely disappearing, try mercury.

If a patient has suddenly a quick succession of epileptic attacks, think of cysticercus.

Lactic acid is good for tuberculous ulcers of the larynx, but does not seem to help those of the mouth and pharynx.

A tumor of the liver that exists for a long time without disturbing the general condition of the patient is an echinococcus.

If a child with fever is breathing more than forty times a minute while lying undisturbed it is nearly always suffering from pneumonia.

Meddlesome midwifery is bad.

As soon as you detect squint in a child, make it use the affected eye by dropping atropine in the good eye, or bandage it.

In pneumonia a total absence of the chlorides in the urine is a bad sign.

In skin troubles look first after the bowels.

GUSTAF F. HEINLE

Blossburg, Pa.

WE ACQUIRE THE CHICAGO MEDICAL TIMES

The Chicago Medical Times, one of the oldest medical journals in the west, has been acquired by *THE AMERICAN JOURNAL OF MEDICINE*, and hereafter will be merged with this journal. The arrangement was completed just as we were going to press with our final forms, so that we cannot give details in this number. We take this opportunity, however, to welcome the readers of the *Times* (from their very affiliation they must be therapeutic enthusiasts) into the larger field of the "CLINIC family." Details next month.



CLINICAL · MEDICINE POST-GRADUATE SCHOOL *of* THERAPEUTICS

George F. Butler, A. M., M. D., Director
Thomas J. Mays, M. D.
C. S. Nelswanger, M. D.

C. E. de M. Sajous, M. D.
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PART III.—LESSON SIXTEEN

GASTRITIS

SYMPTOMATOLOGY AND DIAGNOSIS OF GASTRITIS, ACUTE AND CHRONIC

Acute and chronic gastritis are both very common. We see them every day and there is usually no difficulty in diagnosing these conditions. There is, however, an opportunity for the erroneous diagnosis of an acute or a chronic gastritis when those conditions are not present in fact. Many cases of hyperchlorhydria evincing the symptoms of pressure, fulness in the epigastrium, heartburn and acid eructations are falsely diagnosed as gastritis, whereas really no inflammation of the gastric mucosa is present and there is not a gastritis at all. True gastritis is a disease of the epithelium and of the interstitial lining of the stomach, in which we always have an abnormal secretion; so that for a correct diagnosis the final word can be said only after a careful analysis of the stomach-contents.

Ewald distinguishes an acute simple gastritis, a chronic mucous gastritis, chronic atrophic gastritis, and a phlegmonous, or suppurative, gastritis. Some authors also describe a toxic and an infectious gastritis.

ACUTE GASTRITIS

Simple acute gastritis is a disease that is encountered every day. It is characterized

by an increased secretion of mucus and a desquamation of the epithelium. There are two general classes, distinguished as primary and secondary.

Primary Gastritis.—In the primary division we have those that are caused by direct irritation, which may be either mechanical, thermal or chemical, these agencies producing an injury of the mucosa with a resultant acute inflammation. These conditions may be caused by hot or cold drinks or food, spices, drugs, poisons, large amounts of coarse food, decomposed food and drink, occasionally bacteria. However, bacterial infections usually produce gastroenteritis the predominating symptoms of which are those of an enteritis; ingestion of decomposing milk, sausage, meat or fish may cause these bacterial infections. We also frequently have a diphtheritic gastritis produced by extension from the larynx, also extension of the infection from the mouth produced by thrush. Rarely we may have an extension from the intestines in cases of dysentery. Animal parasites also may produce gastritis, certain ones taken with the food, such as larvæ of flies producing maggots, etc.; occasionally by migration from the intestines, as ascarides, tenia, oxyuria, etc. Lastly, there is a toxic gastritis due to the ingestion of acids, alkalis, corro-

sive metal poisons, alcohol, arsenic and the like.

Secondary Gastritis.—This condition occurs as a complication in acute scarlet-fever, diphtheria, erysipelas, measles, variola, or pneumonia, but more especially in chronic disease of the lungs, liver, heart and kidneys and in some constitutional diseases such as diabetes and leukemia.

Diagnosis.—The history, symptoms and course of the disease, together with the examination of the vomited material, makes the diagnosis very easy. The only possible similar conditions that might be confusing are gastric ulcers and gallstone colic, and these are ordinarily very easily excluded.

SEVERE TOXIC GASTRITIS

The symptoms, in this disease, depend entirely upon the character and the amount of the poison ingested, and to some extent on the condition of the stomach, whether it be full or empty. Violent and burning pain in the throat, along the sternum and in the epigastrium is always complained of. The patient vomits continuously, there is pain on pressure, and the face shows the appearance of marked suffering, is pale, and is covered with a cold perspiration. The pulse is rapid and weak; extremities are cold and cyanosed; respiration is rapid and superficial.

At times the disease does not follow the ordinary course, but it may happen that, while recovery in a few weeks was expected, we may find developing in a few days a septicemia or a general toxemia, with possibly fatal ending.

The diagnosis is very readily made. A history of the ingestion of a poison or marked signs of corrosion about the mouth usually suffice.

Symptoms.—The subject of simple acute gastritis invariably complains of a bad, acid taste, and usually there is considerable thirst. There is a marked loss of appetite, discomfort, pressure and fulness in the epigastric region, followed by nausea and throwing up of a foul, acid, disagreeable, only partly digested and usually fermenting mass, containing much mucus.

The material for clinical examination is usually obtained in these cases from the

vomitus, as the passing of a stomach-tube is but rarely tolerated. The reaction of the vomited material generally is acid, but the total acidity is markedly diminished. Free hydrochloric acid usually is absent, but lactic, acetic and butyric acids practically always will be found. Frequently bile is present in greater or less quantity. There is much mucus and undigested food.

The tongue has a thick grayish coat of mucus and often the teeth imprint may be seen on the edges. Headache, vertigo and weakness generally are also complained of.

The urine is dark in color, small in amount, with a high specific gravity, and contains an increased amount of urates and almost always some indican.

In general, the patient shows no fever, only occasionally a slight elevation of temperature being demonstrable. The pulse is rapid and compressible.

In children the disease may be ushered in with a chill, followed by a high temperature, and very frequently herpes labialis. The fever is mostly of a remittent type.

CHRONIC GASTRITIS

This affection is not nearly as frequent as is ordinarily supposed. It occurs in two forms, namely, chronic gastritis and atrophy of the mucosa, also known as achylia gastrica.

All causes capable of producing acute gastritis if continued may give rise to chronic gastritis. This disease may be either primary (beginning as a gastritis) or secondary (due to other diseases or lesions—usually outside the stomach).

The *primary form* of chronic gastritis may result from an acute attack; but this is rare. Usually it is due to improper living, poor diet, rapid eating, or excesses in eating and drinking. Alcohol is one of the common and chief causes of this form. It is more frequent in those who drink whisky than in those who are given to wine or beer. Tobacco chewers also are affected with this disease, although it is rare in smokers. Among other causes may be mentioned the continuous use of purgatives and coffee.

The *secondary form* may follow other diseases of the stomach, such as carcinoma, a contiguous inflammatory reaction being

set up. It follows ulcer of the stomach but rarely. It is mostly secondary, however, to other diseases, or to diseases of other organs, such as those of the heart, liver or kidneys. It also is a frequent complication (or rather a sequel) of serious (pernicious) anemia or chlorosis. Practically all diabetics suffer from chronic gastritis.

Symptoms.—These appear gradually. The appetite shows a gradual decrease, belching and vomiting are practically always present. The typical symptom-complex in a well-established case is usually about as follows:

The patient complains of pressure and fulness in the epigastric region, especially after meals, during the height of digestion. There is practically no marked pain. Vomiting usually occurs in the morning on an empty stomach, but it is rather infrequent. The vomited material consists largely of undigested food with much tough mucus covering the food particles. Anorexia is a constant symptom, as also is thirst. The tongue is covered with a grayish yellow mucus, although it may appear perfectly clean. Practically always a bad taste in the mouth is complained of. As a rule a desire for sour and highly spiced food is evinced.

As the disease progresses, emaciation becomes very marked, and there is great weakness. Further, the patient presents a characteristic mood, and feels depressed, with a tendency to melancholia and hypochondriasis.

Diagnosis of Chronic Gastritis.—In all cases the most important method of diagnosis is the examination of the stomach-contents. Even in the milder forms of gastric disease the physician today who fails to analyze or have analyzed the stomach-contents is groping in the dark. A mere chemical examination for hydrochloric acid is not enough. A microscopical examination is of greater value. Only by these means are we enabled to know what the stomach is doing.

Examination of Stomach-contents.—In chronic gastritis the examination of the stomach-contents for diagnostic purposes is absolutely essential, owing to the fact that the disease is characterized by such vague and indefinite symptoms.

The stomach-contents after a test meal as a rule exceed the normal and contain large particles of undigested food covered with mucus. They usually present the appearance of a thick, sticky fluid, and there is practically no evidence of digestion. The presence of mucus is of the greatest diagnostic importance. The microscopical examination shows nuclei only if digestion is normal, whereas if it be deficient, whole cells are present. The secretion of gastric juice is markedly diminished. Free hydrochloric acid, if present, is found in only the merest traces. All the ferments are decidedly decreased. Starch digestion is little affected, however. The organic fatty acids are not, as a rule, large in amount.

One of the characteristic findings is the presence of a large amount of mucus containing leukocytes or their nuclei and epithelial cells from the stomach-walls. If there is a little free acid present the mucus may swell up and appear comparatively greater in volume. Mucus and hydrochloric acid as a rule vary inversely as to quantity. Disturbances of the motility of the stomach are of more importance usually than those in the secretory activity, in so far as the nutrition of the patient is concerned.

Under normal conditions, even though gastric digestion has not taken place, the food-material is passed out into the intestines and is digested there. With impaired motility, stagnation of food, with resulting dilatation of the stomach, occurs, causing more or less disturbance, including fermentation and often putrefaction.

The motor power of the stomach may or may not be impaired, depending upon whether hypertrophy or not has occurred. Constipation is the rule, and this may alternate with diarrhea. Fermentation and putrefaction of the food in the intestines usually produce much flatulence. The urine is decreased in amount, with consequent high specific gravity, always showing an increased amount of phosphates. The heart is normal except for the palpitation which usually occurs after meals. Practically all of the patients complain of a sensation of fulness in the epigastric region.

Achylia Gastrica.—Any chronic gastritis may lead to complete atrophy of the

gastric mucosa, with destruction of the secreting glands; hence the gastric juice that should be produced by these glands is absent, and from this we get the term *achylia gastrica*. This latter condition may be complete or partial when following chronic gastritis.

In carcinoma we usually have *hypochylia*, that is, a reduction in the production of acid and ferments, but rarely complete suppression. *Hypochylia* may also occur in carcinoma of the breast, intestines or uterus, due to a toxic effect produced by any malignant disease. It may also occur in the later stages of diabetes mellitus. However, it often occurs as an independent disease, known as *acute toxic gastritis*.

In **Pernicious Anemia** *achylia* is the most common condition of the stomach, a majority of the cases occurring during middle or adult life, very few being found in younger persons.

The symptoms are not characteristic in any way. There may be no gastric symptoms whatever; even the appetite may be unimpaired. Most of the patients have an aversion to meat; however, this is a characteristic condition in practically all gastric carcinomas. Pain is rare. There is usually some epigastric pressure and fulness. Vomiting is not a constant symptom, but belching is. Headache and vertigo are common. Constipation or diarrhea, especially diarrhea after breakfast, is very frequently found. The patient may be well-nourished, especially if the motor power of the stomach is not impaired.

The only way to arrive at a positive diagnosis is to examine the stomach-contents. One hour after a test meal food particles will be found showing no change, excepting a slight swelling up. Free hydrochloric acid is entirely absent, while the total acidity is very small. Lactic acid is absent or only shows traces. The latter is found in large amount only when fermentation due to motor insufficiency has taken place. The reaction for peptone and for propeptone is negative. Pepsin and rennet ferment are entirely absent. Mucus is found in traces only, if at all.

One characteristic feature of the disease is that the acidity of the urine during the

height of digestion is not reduced, as in normal individuals.

A diagnosis is a very simple matter if a thorough analysis of the stomach-contents is made. In these cases, if the patient be given a glass or two of milk and this be withdrawn in twenty or thirty minutes, it will be found to be perfectly unchanged, in other words, not coagulated, showing that the secretion of pepsin and of rennet is absent. Contrary to what we should normally expect, these patients do not become rapidly emaciated if the motor powers of the stomach are at or near normal, owing to the compensating effect of intestinal digestion.

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MANAGEMENT OF ACUTE AND CHRONIC GASTRITIS

ACUTE GASTRITIS

The treatment of acute gastritis consists, first, in removing all irritant substances from the stomach, and, secondly, in soothing the inflamed organ. The stomach naturally tends to eject any irritating contents, but after the main portion of these has been ejected by vomiting, small quantities of exceedingly bitter bile mixed with mucus may remain and give rise to constant nausea and retching.

Clean Stomach First Step.—In order to remove from the stomach every objectionable substance, it is advisable to wash out that organ or else to let the patient drink several tumblerfuls of lukewarm or warm water, and after this has been thrown up, to repeat the process several times, until all irritant contents have been washed away, when in many instances all nausea will disappear. Occasionally the first draft of plenty of warm water will so dilute the stomach-contents that the irritation no longer is capable of inducing emesis. In such a case it is advisable to tickle the fauces with a feather or finger to bring about the desired result.

Personally I think it is a very much better treatment to wash out the stomach by means of a gastric siphon, or stomach-tube, but unless the patient is accustomed to its use the plan of drinking and ejecting the water will be less disagreeable to him.

In mild cases this treatment is all that is required, and after a few hours' rest the stomach will be all right again; but for at least a day afterward the diet should be very light, consisting chiefly of milk and farinaceous foods.

Severer Attacks, with Intestine Involvement.—When the attack is more severe and the catarrh has affected the Lowels also, as shown by a tendency to diarrhea and pain not confined to the gastric region but extending over the abdomen, half an ounce of castor oil with 8 or 10 minims of tincture of opium should be given, so as to remove everything irritating from the intestines. If, after the oil has acted, the pain, nausea or vomiting should still persist, or if there be any yellowness of the conjunctiva, then a calomel, podophyllin and bilein tablet should be given every half to one hour until four or five have been taken, followed by a saline laxative.

Alimentation.—The best food is simply milk diluted with one-fourth to one-half its volume of carbonated water, unless the bowels be loose, when lime water should be substituted. This diluted nourishment may be given in quantities of five or six ounces every two hours, but should it be rejected by the stomach, it is well to let the patient take nothing but a little ice water and small pieces of ice until the acute irritation has subsided. Should there be fear of failure of strength, the nutrition may be maintained by nutritive suppositories or enemas.

Medicinal Treatment.—After all irritant material has been evacuated from the stomach, one of the best sedatives to give is bismuth, advantageously prescribed in the following mixture:

Allaying Irritation.—Bismuth carbonate, grs. 10; sodium bicarbonate, grs. 10; spirit of chloroform, min. 10; peppermint or cinnamon water, oz. 1—this constituting one dose. If there is much pain, then morphine, codeine or deodorized tincture of opium may be added to each dose. If severe vomiting continues, 5 minims of dilute hydrocyanic acid may be added to the primary mixture, either with or without the opiates, as the case may demand.

Should the Lowels be loose, the intestinal antiseptics (sulphocarbolates) should be

given with the bismuth mixture immediately after each evacuation. Counterirritation to the epigastrium by a mustard poultice or a spice poultice tends to relieve both pain and vomiting. A full warm bath often is beneficial and soothing in the case of children as well as adults. One of the chief indications in acute gastritis being rest, the patient, after the foregoing has been attended to, should remain quietly in bed.

Subsequent Management.—Often there continue both gastric irritation and a febrile condition, both of which require attention; and generally they yield to small doses of morphine and poultices to the epigastrium. If the febrile movement is active and attended with malaise and headache, small doses of phenacetin together with hydrotherapeutic treatment should be employed. Often patients are allowed to eat too soon, and it is best that food be forbidden until it is craved, when it is to be given in small quantities and only of the blandest kind.

When called upon to treat an acute gastritis (or chronic) unaccompanied by fever, and otherwise of mild type, the very same careful attention must be given as in the severer cases, for even if of less immediate intensity, the condition is quite likely to continue as a chronic gastric catarrh or to invite the occurrence of some of the functional stomach disorders that may have been awaiting a favorable opportunity. The treatment, as well as cleaning out and rest, should be the same as in other forms of acute gastritis, and if the symptoms continue unduly, strict search should be made for something more than a transient accidental cause, for often there is found in these forms of acute gastritis some disease of the kidneys, intestines or liver, or, in some cases marked anemia or some nervous disorder. The cause, of course, should be removed by appropriate treatment.

Secondary, or Sympathetic, Acute Gastritis.—We have another form of acute gastritis, accompanying acute infectious diseases, such as scarlet fever, smallpox, measles, and so on, the morbid anatomy and clinical history of which resemble those of other forms of this affection. Sometimes it is the most dangerous expression of the determining malady, although doubtless part of

the symptoms are the result of the toxemia operating upon the nervous system.

So far as compatible with the management of the specific disease, the stomach symptoms should be treated as if dealing with a simple gastritis. Great prostration demands stimulants, although alcohol as a rule is contraindicated in these gastric disorders.

In the management of these cases a great deal depends upon proper dieting. An abundance of fluid is demanded when the original trouble is some acute disease, in order to keep the patient nourished. On the other hand, there is inability to digest, and then it is wise to withhold all food. There is a greater tendency to overfeed than to underfeed fever patients of every kind. To rest the stomach intermittently is good practice, and this should not be postponed until the symptoms already are so aggravated that prolonged rectal alimentation is required.

Toxic Acute Gastritis.—Acute gastritis may result from the ingestion of corrosive liquids, scalding water, or something of that kind, resulting in injuring the superficial mucosa. The character of the inflammation is influenced not only by the amount but also by the nature of the irritant, hence the condition following the introduction of pure alcohol differs from that resulting from acids, alkalis, arsenic, phosphorus, and other chemical irritants; and these differences call for a difference in treatment.

Wilson states that in all cases of this kind it is necessary to empty the stomach immediately, and that, when there is not too much damage to the pharynx and esophagus, it is better to introduce a soft stomach-tube than to depend upon an emetic. There are exceptions to this rule, as for instance when the poison is taken soon after eating solid food, because at such a time the tube is unsuccessful. An emetic generally succeeds best when the stomach is full, and siphoning when the viscus is relatively free from larger particles.

In order to secure free emesis, it is best to employ a full dose of apomorphine hypodermically, assisting its action by large draughts of warm water. No delay in emptying the stomach should be permitted,

and if the emetic is not prompt in its action, the mere introduction of the tube probably will induce vomiting.

While preparing to empty the stomach, some mild alkali (magnesia, chalk) should be freely administered if the noxious substance swallowed is an acid or escharotic. On the other hand, if some corrosive alkali was swallowed, then the victim may be given vinegar, lemon juice or acid wine, and the like. The demulcents are always in place, and large quantities of white of egg should be taken after the ingestion of corrosives of any kind.

Treatment of Toxic Gastritis.—The subsequent behavior of cases of this kind is so variable that no definite procedure can be outlined.

When there is a condition of shock, stimulants (alcohol) should be given per rectum; also morphine under the skin, while heat and friction are applied all over except the epigastrium. Bismuth in an infusion of poppy seed or some similar demulcent may be administered frequently if it affords relief. The same may be said of shaved ice. In other respects the stomach should be permitted to enjoy absolute rest.

Days and even weeks may elapse before food can be safely permitted, the return of appetite usually being the best guide.

The Inebriate's Stomach.—Whether inebriates have been on a debauch and drank excessive amounts of distilled liquors or not, at all events we here have to deal with a form of gastritis partly from local irritation and partly from constitutional causes. When such excesses have been frequent, the stomach becomes thickened, its walls infiltrated with round cells, there is suppression of the normal secretion, and a large discharge of mucous and pituitous matter; sometimes hemorrhage occurs. In association with these, all the well-known phenomena of chronic alcoholism, including profound nervous phenomena, are likely to be observed.

These cases are very serious and undoubtedly death often is the direct result of the gastric condition. They are best treated by the methods already described, together with such other measures as the general condition may demand.

In the afebrile gastritis of the inebriates one has to deal with a milder affection that usually subsides under the employment of calomel and saline laxatives, perfect rest of the stomach and rectal alimentation as well as medication, with, of course, the complete withdrawal of alcoholics. Generally large doses of chloral rectally administered will be necessary, and this will affect as favorably the gastric as it does the other symptoms.

The Morning Vomiting of Drunkards.—Here, when there occurs the ejection of quantities of mucus and of alkaline fluids, after which the victim is enabled to retain his morning dram and subsequently a small amount of food, it is absolutely necessary to prohibit the taking of alcoholics abruptly; this usually serves to relieve the gastric symptoms at once.

Furthermore, benefit appears to follow, in this condition, the administration of drop-doses of Fowler's solution of arsenic. Sometimes, also, good effects are derived from the use of a few drops of tincture of capsicum, or small-dose granules of capsin. Quassin or quinine often are of value. Nearly all such patients improve by taking some time before breakfast a large dose of saline laxative, to which oftentimes a teaspoonful of soda can be added with great advantage. The amount of the saline should be sufficient to insure free evacuation. Very often the digestive condition in the morning will be benefited by regularly taking, when retiring, a mixture, consisting of 1 part of ammonium chloride, 3 parts of sodium bromide, and 12 parts of magnesium sulphate.

After all is said, the best cure for the drunkard's stomach is abstinence from alcoholics, while, if this can not be brought about permanently, even a temporary stay of proceedings will prove of much benefit.

CHRONIC GASTRITIS

General Observations.—The first essential in the treatment of chronic gastritis is to remove the sources of irritation which brought it on, exactly as for the acute attack. In general, the same dietetic treatment as outlined last month for dyspepsia, so called, should be followed. The patients must, of course, avoid alcohol in any form, sugar and condiments, eat fat sparingly, and

chew their food slowly and masticate thoroughly. Liquids should not be taken together with solid foods, preferably following; while farinaceous and proteid foods, if necessary, must be taken at separate meals. The body must be kept warm, the bowels open, and the mind at ease. In cases of dilation, great relief is afforded by washing out the stomach. This is best done before breakfast, so that the long night's rest may allow as much food as possible to be absorbed and the waste from washing away ingested nutriment reduced to a minimum.

Chronic Gastritis of Deranged Metabolism.—The condition under discussion often is associated with renal disease, and accompanies the continued toxemia and anemia of tuberculosis, syphilis, etc. When from any cause the general nutrition is greatly lowered, particularly when the appetite is out of proportion to the digestive strength, or when to satisfy cravings of special tastes certain indigestible foods make up the bulk of the diet, or when hoping that thereby to improve the general health the physician is tempted into forced feeding, chronic gastritis is a natural result.

Under the foregoing conditions the acidity of the gastric juice is lowered or entirely abolished, or if it be in excess, this will be found to depend upon organic acids. It is possible for marked fermentation, or even putrefaction, of the stomach-contents to take place, and this is particularly true when gastrectasis with consequent food stagnation is present. The movements of the stomach are quite generally feeble, while inactivity of the liver and intestines usually is a factor.

Remove the Causative Disease.—In treating this condition, every effort must be made to remove its true cause. Thus, digitalin, strychnine, rest in bed, massage, are to be applied when cardiac or pulmonary disease gives rise to various obstructions. Calomel, podophyllin and bilein, followed by daily draughts of saline laxative are first to be considered.

Physiotherapeutic Measures.—A more active life should be required of the patient suffering from hepatic trouble, but the increased exercise must be brought about gradually, as bodily activity is attended with increased tissue waste. A bilious attack

may easily be precipitated by the sudden adoption of an active life. The object to be attained, says Wilson, in his "American Textbook," is improved oxygenation, with increase of the activity of the capillary circulation and the hurrying of the lymph stream. These requisites can usually be obtained with most satisfaction by subjecting the patient to a combination of hydiatric treatment and moderate physical exercise.

The Turkish bath properly given is of great value, but too often, owing to ignorant attendants, it leads to exhaustion rather than benefit. A brief cold shower-bath, or needle-bath, followed by brisk friction and rest in bed afterward, is a measure of great importance. The mistake is commonly made of continuing the bath too long at first, so that there results depression of the nervous system, and so a worse rather than a better condition of the hepatic functions. The application of a cold-pack over the liver is of real use, as is hepatic stimulation when it can be intelligently directed and its immediate effects observed. The cold and wet sheet is another method not to be forgotten, but should be applied only by an experienced person. This whole matter of hydrotherapeutic treatment of chronic gastritis will be taken up elsewhere.

The application of cups or leeches over the region of the liver, as also counterirritation, has fallen into pretty general disuse. Very often we find patients prescribing for themselves plasters from which they claim to receive benefit. There probably is truth in the conclusions reached by the old-time therapists as to the benefit attending such measures of treatment, particularly in hepatic cirrhosis. When inosculation of the portal and systemic veins has become established, local depletion by leeches or cupping under certain conditions seems indicated.

Emunctories Require Attention.—The urine should be studied, and when large amounts of indican are present, and particularly when the alvine evacuations are lacking in color or are offensive, it is advisable to employ enteroclysis with a view to cleansing the bowel; hot irrigations two or three times a week have seemed to me of great value. The importance of appreciating the state of

the liver is great. We find that the calomel, podophyllin and bilein are excellent drugs here.

When the toxemia is due to renal failure, hot vapor-baths should be used with frequency until the condition of the blood is improved and the function of the liver has been at least partially restored. When it does not disagree with the stomach, an abundance of pure well-aeriated water should be taken.

If specific disease be present, this should receive appropriate treatment as a matter of course.

In cases of advanced anemia the relief should be attempted without too much dependence upon the iron preparations. True, there are times when iron may be employed with great benefit, but its routine administration is probably undesirable in the condition under consideration.

The end can be reached more easily by hygienic measures, together with local treatment of the stomach. The latter measure is scarcely to be omitted in cases of established chronic catarrhal gastritis. Daily lavage should be directed, and it should be practised by a person expert in the use of the tube, so that frequent observations can be made as to the motor activity as well as to the gastric chemistry.

Regulation of Diet.—In this way also the diet that best suits the case can be ascertained, for it is a well-known fact that great differences exist as to the most suitable foods in given cases. It is not for these observations alone that lavage is indicated, but because of the opportunity it affords of clearing the stomach of irritating contents, of applying to its mucosa remedial agents, and of making it possible for the stomach to enjoy a rest under the best possible conditions.

It is desirable to have the heartiest meal ordered for the middle of the day, then to wash out the stomach at bedtime, thus insuring for the organ inactivity through the night, while breakfast should be delayed to as late as possible in the morning. Another plan is to give the heartiest meal at six o'clock p. m., execute lavage early in the morning, and to have the patient fast for several hours thereafter. The former plan will usually be selected.

A weak salt solution or a solution of boric acid is advisable for the lavage, and following this a 1 : 1000 solution of silver nitrate may be introduced and immediately removed from the stomach; or a mixture of two or three drams of fluid extract of hydrastis or of hamamelis in a pint of water may be used.

These local measures, if persistently carried out, in addition to such general treatment as the case may demand, will afford the most satisfactory results, unless the condition depends upon some irremedial disease, when relief will, of course, be all that can be expected.

The diet in chronic gastritis must be varied considerably to suit the individual case. The following general rules can be laid down: All overstimulating, coarse and irritating foods should be prohibited. Unbolted flour, coarse meals and grits, as for instance oatmeal, are unsuitable. Barley, rice and sago must be eaten only when so thoroughly cooked that the grains easily disintegrate. Fruit is but sparingly permissible, and none that contains seeds. Fat should be allowed only in limited quantities.

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COMMENTS ON THE LESSON

Since there are many new readers of this issue we wish to explain again that this course is open without charge to any physician or advanced medical student who is a subscriber to *CLINICAL MEDICINE*. The course has been running for three years. If any new subscriber wishes to secure the back lessons they can be provided in pamphlet form at a minimum price which just about covers the cost of production. Write us. They are not sold to nonsubscribers.

The student may begin his studies at any time, though we prefer that he should commence at the beginning of some year. Proficiency is shown by written answers to the examination questions found at the end of each month's lessons. If the student does the work of an entire year to Dr. Butler's satisfaction he receives the handsome certificate of the school without charge.

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cates showing the amount of work accomplished.

We shall hope that there will be a large enrollment during 1911, and that the course may prove even more satisfactory than it has in years past. Dr. Butler will be glad to receive any suggestions looking toward its betterment.

Bronchitis in Children.—Dr. J. C. Wakefield, of Vinco, Pa., a very successful practitioner, a gentleman who sends in excellent papers, writes as follows regarding his treatment of acute bronchitis in Pennsylvania:

"Confine the child to the crib or bed and cover with sufficient clothing to promote diaphoresis and afford protection from drafts. Move the bowels by broken doses of calomel followed by a saline, sponge the surface with a solution of epsom salt, one ounce to a quart of water with ten minims of carbolic acid. Then apply a compress, wet with the same solution warmed to the body temperature, to the chest and change it every four hours. Diaphoresis should be promoted by pilocarpine, potassium citrate or ammonium acetate. Fever should be controlled by aconitine, dosimetric trinity or defervescent compound, which will also equalize the circulation.

"Secretion may be promoted by emetine, lobelin or iodized calcium. Inhalation of steam impregnated with oil of eucalyptus should be used to soothe the mucous membrane and thin the secretion. The nose, mouth and pharynx should be sprayed or washed out with some good antiseptic solution.

"If the heart wavers give eactin or brucine with digitalin. Extreme edema of the mucous membrane will yield to inhalation of a solution of adrenalin. Nourishment should be concentrated so as not to distend the stomach and embarrass the breathing. Monobromated camphor combined with cypripedin will relieve irritable cough. Helenin, emetine and hyoscyamine in appropriate doses will often work admirably. If there is need for intestinal antiseptics use the sulphocarbolates. Look out for indigestion as a complication.

"When the patient is convalescent give triple arsenates with nuclein."

Can Pneumonia be Aborted?—Dr. W. I. Power of Phillipsburg, Montana, writes:

"My experience is that pneumonia can often be aborted, especially when seen early. I believe that I have aborted it in some cases. The principal, or better, one of the principal things, is to clean out the bowels thoroughly and keep them very active, as well as to keep the kidneys and skin active and limit the amount of fluid to a minimum. I was called on December 10 to see J. O. Found he had a severe chill two hours before; pulse 120, temperature 104.2° F., skin dry and hot, bowels constipated, almost constant cough, sputum rather free, rusty, tenaceous. Lower half of right lung practically solid; respiration 42. Diagnosis, lobar pneumonia. Patient 18 years old, full blooded, stout. I gave calomel, gr. 1-6, podophyllin, gr. 1-6, every half hour for eight doses, then two tablespoonfuls of saline laxative in half a glass of hot water. Repeated this in one hour, which produced a free action of bowels. When this was begun the deferrescent compound (aconitine, veratrine and digitalin) was given every twenty minutes until the pulse came to 100, when it was given every hour. A cold pack was placed on the side, extending from sternum to spinal column, and changed once an hour until temperature was below 101° F., Dec. 11 I found the patient resting easily, temperature 100.2° F., pulse 108, respiration 26; bowels had moved freely several times; skin moist, cough less, sputum less and less color about it. Dec. 12, pulse 84, temperature 99° F., respiration 20; no pains, patient hungry, feeling well. Medicine continued but at longer intervals. Dec. 13, pulse 72, temperature, 98.6° F., respiration 19, no fever. Two days later patient began sitting up and in six days from date of first visit, was well. Have had two or three other cases like this, so I call this an aborted case."

Treatment of Smallpox.—Dr. Theodore Schmalzriedt, after describing a very bad case, goes into the treatment as follows:

"The keynote of the treatment which brought about this patient's recovery was heroic stimulation, free elimination and unremitting antiseptics.

"During a critical period, when life hung by a hair, she received 2 grains of strychnine

per day for several days consecutively. Enormous dosage to be sure, but justified by the fact that dissolution was momentarily to be expected without continued stimulation.

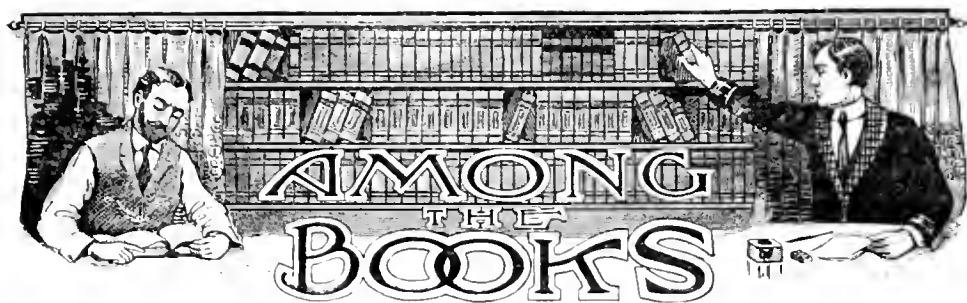
"First of all, we had a putrefactive toxemia to overcome. This we accomplished by elimination with calomel, effervescent, magnesium sulphate, turpentine enemata and high colonic flushing with an alkaline antiseptic. The sulphocarbolates were a standby throughout, crowded at first to toleration and then administered in quantity sufficient to control intestinal putrefaction.

The characteristic septicemia was treated by free elimination, intestinal asepsis, stimulation, and external asepsis. Every day pustules were opened, scabs and crusted pus softened with warm sweet oil and wiped away, ulcerating spots cleansed with hydrogen peroxide, the entire surface bathed with a warm boric-acid solution, wiped clean and covered with carbolated or camphorated oil to relieve itching and burning. By removing the adherent scabs, pus, and other impurities—which in smallpox are legion—we re-establish the excretory function of the skin, thereby eliminating the toxins at their source.

"If I shall again have occasion to treat smallpox, I should endeavor to saturate my patient early with calcium sulphide and to push nuclein from the beginning with the purpose of stimulating leukocytosis and preventing suppuration."

EXAMINATION QUESTIONS

1. What are the causes of acute gastritis? Of chronic gastritis? What do we mean by a "primary" and what by "secondary" gastritis?
2. Give the symptoms of acute gastritis. Outline a treatment for this condition.
3. Describe the symptomatology of chronic gastritis.
4. How does alcoholic gastritis differ from an ordinary chronic gastritis?
5. What are the characteristic stomach findings in chronic gastritis?
6. Differentiate the stomach findings and symptoms of chronic gastritis, ulcer of the stomach and cancer of the stomach.
7. What is the relation between pernicious anemia and chronic gastritis?
8. Outline a treatment of chronic gastritis. How would you modify this in the case of alcoholics?
9. Describe a case of chronic gastritis (occurring, if possible, in your own practice) and tell treatment employed.



VECKI'S "PREVENTION OF SEXUAL DISEASES"

The Prevention of Sexual Diseases. By Victor G. Vecki, M. D., Ex-President, San Francisco German Medical Society; Member American Urological Association, American Medical Association, etc. With Introduction by W. J. Robinson, M. D. Published by The Critic and Guide Publishing Company, 12 Mt. Morris Park, West, New York. Price \$1.50.

If we admit—as we must admit, if we are honest with ourselves—that more misery, more ill health, more ruined lives, more sterile women and unhappy families are due to the sexual diseases than to any others, it would seem that we should be compelled to rend the veil of secrecy and hypocrisy that has covered this subject and strive openly and honestly to find practical means of arresting their ravages.

Gonorrhea and syphilis are probably the most common of all diseases. As Dr. Vecki says, "all statistics are more or less guesswork," yet the statement that "five million people in this country are or have been tainted with syphilis" is probably no exaggeration, and we know that the number of those who suffer or have suffered from gonorrhea is larger still, and that seventy-five percent of the gynecological operations and thirty percent of the blindness are its direct results.

"To anyone who can think at all," says Vecki, "it must be clear that the question of contagious sexual diseases, or, as some call it, 'The Venereal Peril,' is an actually burning and enormous question. So far humanity has not even started to consider it seriously. And it is easy to explain why

those who do understand shrink from even approaching the gigantic task of fighting this so many-headed hydra, and that so far this fight has not begun, and is nominally left in the hands of various *committees*, who *pass resolutions*."

If we try to trace the real cause of a single case of sexual disease we find, in every instance, says Dr. Vecki, *ignorance, prostitution or alcohol*. These are our points for investigation, yet the author thinks that these factors are all traceable to fundamental defects in our social system. Poverty and opulence are the real *underlying* factors in the production of sexual debauchery.

The ignorance of the people concerning sexual disease is appalling. Mothers are now being urged to instruct their daughters, and fathers their sons, but rarely do either know, even faintly, of the ravages of gonorrhea and syphilis. This knowledge should be imparted in school, the author thinks. In Germany there is compulsory instruction concerning the perils of venereal disease, and this instruction is open to parents as well as to pupils.

Dr. Vecki handles the painful subject of prostitution without gloves. He accepts this oldest of all trades as a fact, as something that will continue to be with us and which must be dealt with along rational lines. He believes that laws intended to suppress prostitution can never succeed, and that instead of crushing out the venereal diseases they only favor their spread. The best available means is *regulation*—and this undertaken in the interest of the prostitute, who realizes the danger of infection to herself far more than does her average patron.

What can be done in preventing venereal disease by this method alone is shown by

European army statistics. In Germany, where control is most rigid, there were reported 26 per mille of infected soldiers; in France, 42 per mille; in Austria, where regulation is lax, 61; in Italy, 85; and in England, where there is no regulation, 174.

The chapters on "The Physician's Duty Toward the Prevention of Sexual Disease" and on "Individual Prophylaxis" are especially interesting. I do not believe any medical man can read these portions of the book without realizing the greatness of his own personal responsibility. The patient must be taught the dreadful contagious character of the disease from which he suffers, as well as be warned against exposing others. As Dr. Vecki strikingly says:

"How often must I shudder when I see the syphilitics mingle with the crowd. The crowd does not know, while they themselves seem to have forgotten this evil or never think of what dangerous individuals they are. They shuffle and play cards, sometimes moistening the fingers with the saliva from mouths full of mucous patches. They roll cigarettes for others, drink from the loving or communion cup, kiss anyone who suffers it, mostly defenseless children; they wait upon the people in cafés and restaurants, cook for them, shave them, nurse their babies, and for very little money the good-looking ones offer their poisoned kisses to the youth of the country on the public streets or at places of public amusement."

Dr. Vecki frankly advises instruction in individual means of prophylaxis to those who do and will frequent women likely to be infected. He gives in detail a description of the methods which have been and are employed, from the condom to the calomel ointment of Metchnikoff. The giving of this instruction, in his opinion, is more than justified by the results—the saving of thousands of young men, their wives and their progeny from loathsome, crippling disease. As an illustration of what can be done, he cites the results obtained on one vessel in the United States Navy. Of 256 sailors who had received careful instruction as to methods of prevention and who exposed themselves to infection in different ports, not one contracted gonorrhea or syphilis.

I have referred to a few only of the many striking things in Dr. Vecki's book, which, whether one agrees with him or not, is from beginning to end as earnest as it is thought-compelling. Whether the remedies he names are the best remedies I shall leave for the reader to decide, but that the argument presented deserves consideration of the most searching kind there can be no doubt.

The thought that seems to me to run through the book is this: The social evil is simply the symptom of a disorder of society—and it is a condition which must be dealt with as a disease rather than as a sin. It can not be cured by preaching at it and against it, with eyes closed to the compelling hehest of sex; it must be studied as we would any other disease, until we understand its etiology and can interpret its symptoms. Dr. Vecki's logic has all the force of the Teuton. The Puritan will see in his book much to criticise.

We urge every reader of *CLINICAL MEDICINE* to buy this book and read it most carefully and thoughtfully.

THE PHYSICIAN'S VISITING LIST

The Physician's Visiting List for 1911. (Lindsay and Blakiston's.) Philadelphia, P. Blakiston's Son & Co. Price \$1.25 up, according to size and arrangement.

This is the sixtieth year of publication of this well-known visiting list, and the friends it has gained in the many years of its existence are numerous. We wish it many more, reminding our readers who are accustomed to this particular list that the new year makes a new book necessary.

VON NOORDEN'S "DISORDERS OF METABOLISM"

Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition. By Prof. Dr. Carl von Noorden. Part VIII: Inanition and Fattening Cures. Part IX: Technic of Reduction-Cures and Gout. New York: E. B. Treat & Co. 1910. Two volumes; price, per volume, \$1.50.

We have repeatedly had occasion to announce in these columns, the publication

of Professor Von Noorden's excellent treatises on metabolism, of which Treat & Co. are bringing out an authorized American edition, under the supervision of Dr. Alfred C. Croftan of Chicago. Von Noorden stands foremost among the investigators of disorders of metabolism and nutrition and his writings are generally accepted as of the greatest value, based as they are upon careful experimental and clinical research. The earlier instalments of the series treat the subjects of obesity, nephritis, colitis, the acid autointoxications, diabetes mellitus, saline therapy, and drink restriction.

BOOKS ON DISEASES OF THE HEART

Graphic Methods in Heart Disease. By John Hay, M. D., M. R. C. P. With an Introduction by James Mackenzie, M. D., M. R. C. P. London and New York: Oxford University Press. 1910. Price \$3.00.

Diseases of the Heart. By James Mackenzie, M. D., M. R. C. P. Second edition. London and New York: Oxford University Press. 1910. Price \$5.50.

Heart Disease, Blood Pressure, and the Nauheim-Schott Treatment. By Louis Faugetes Bishop, A. M., M. D. Third edition. New York: E. B. Treat & Co., 1909. Price \$3.00.

Of these most recent books on the study of the heart in health and disease, and on the treatment of the latter, the one first named, that by Dr. Hay, describes in an excellent and comprehensive manner the modern graphic methods for examining the condition and working of the circulatory apparatus. Recognizing the fact that the value of sphygmographic tracings is slight in the absence of simultaneous records from the apex-beat, jugular pulse or the liver, the author has presented the results of detailed studies of these combined observations. The book is amply illustrated, the many tracings being especially excellent.

The second edition of Mackenzie's "Diseases of the Heart" really requires no introduction. The work embodies the results of observations made during an active practice of more than a quarter of a century. The author's special object has been to ascertain the mechanism by which the symptoms of

cardiac affections are produced, to discover their relationship to organic changes in the heart, to determine their prognostic significance, and, finally, to employ them as a guide for treatment.

The book may be somewhat too exhaustive and—shall we say it?—too difficult for the general practitioner. But to one who is particularly interested in the subject and who wishes to study it more deeply than is possible from the ordinary textbooks, this work offers an invaluable mine of information. The text is well illustrated by many tracings, and there is an efficient index.

Bishop's work, "Heart Disease and Blood Pressure," is also sufficiently well known. Under the stress of our present-day life it is unavoidable that affections of the circulatory apparatus should increase in frequency and intensity, and if, as the author says in the preface to the first edition, tuberculosis has for its victims the most attractive of the youth of the land, high arterial tension claims the best and most successful of those past middle life who have borne the weight of the strenuous demands of a modern career. Dr. Bishop affords us the means of recognizing the danger-signals which point to circulatory changes and presage the approach of destructive disease.

This is a most important contribution to the subject and should be carefully studied by every physician. The appendix discusses the Nauheim-Schott treatment and describes this important therapeutic means of dealing with the conditions under discussion.

BRAMWELL'S "HYPNOTISM"

Hypnotism and Treatment by Suggestion. By J. Milne Bramwell, M. B., C. M. New York: Funk and Wagnalls Company. 1900. Price \$1.75.

The author, who himself has seen the work of James Esdale in Perth (Scotland) and that of John Hugh Bennett in Edinburgh, and who has made a careful study of hypnotism and its employment for the induction of surgical analgesia and for the treatment of mental and nervous diseases, presents in an interesting and readable manner the results of his many years of study of the problem.

Although he raises objections to all theories which so far have been advanced in its explanation, the author, unfortunately, has no theory of his own to bring forward in substitution of them. (page 207). However, he adduces an abundance of case-histories, both surgical and medical, in which hypnotism and suggestion have been employed with success and also describes with great care the various methods employed. The book is an important one and is of interest in view of the fact that the psyche of our patients and the power of mind over matter is receiving more and more attention.

ATKINSON'S "FUNCTIONAL DIAGNOSIS"

Functional Diagnosis: the Application of Physiology to Diagnosis. By Thomas G. Atkinson, M. D. Chicago: Chicago Medical Book Company. 1909. Price \$1.50.

This textbook of diagnosis was conceived and written from a rather novel idea in the making of books on the subject. Having observed that his students of the third and fourth years found it difficult to correlate the pathological and clinical teachings to the lessons in physiology and other branches received during the first two years of their studies, the author set himself the task to supply the means by which the student might find the interrelation of physiology and pathology, and by which he might reason from that which is known as normal to the nature of the pathological conditions or symptoms of such which he finds at the bedside or in the clinic.

The author's long experience as a teacher and clinician and his well-known ability as a writer promise that the book before us is a useful one, and in fact we have found many things in it which would justify this estimate.

MURRAY'S "OSTEOPATHY"

Practice of Osteopathy; Its Practical Application to the Various Diseases of the Human Body. By Charles H. Murray, A. B., B. D., D. O. Elgin, Illinois. 1909. Price \$2.50.

"The object of this work is to meet the need, on the part of practitioners of all schools, of information on the science of osteopathy, and to present the practical side of osteopathy in a very plain and simple manner. While it does not deal with the theory to any great extent, the practical side is presented in such a manner as to be of great assistance to medical doctors who have not time nor the inclination to take a regular course in osteopathy."

This abstract from the preface may give an idea of the scope of the volume before us. It is profusely illustrated and supplies a full description of all the various manipulations which the osteopathic practitioner may deem necessary to carry out on his patients.

While the basic truths of this old-new system of healing must be patent to and is acknowledged by all thinking physicians (see for instance an article in *The British Medical Journal* for September 3, 1910, page 58), the Bookworm is sorry to find directions given, in all earnest, for the osteopathic treatment of typhoid fever, diphtheria, scarlet-fever and other infectious diseases. The fact that the bacterial etiology of these diseases and the need for isolation and disinfection is recognized by the author (Thanks!) is not sufficient to imbue the laity and amateur healers with the importance of the greatest care in the treatment of these diseases and with the great need of prophylaxis.

The Bookworm submits it as his opinion that osteopaths should limit themselves to the management of such affections as are amenable to mechanical measures pure and simple, and to leave diseases requiring chemical, biochemical, bacteriological and other technical information to the treatment of physicians who are trained to cope with them. Osteopaths, to retain the name chosen by themselves, might do excellent work and be of immense value to suffering mankind if they would work *with* physicians, in such way that certain cases requiring the special treatment they are trained to give were referred to them, to be done by the advice and under the direction of the physician in charge. In all but purely mechanical conditions the greatest possible amount of anatomical and even physiological knowledge

is not sufficient, and in such cases physicians are the only properly qualified "healers" to be consulted. We have no quarrel with osteopathy—in its place and within its limits; but it should not essay to go beyond.

BLECH'S "BORDERLAND SURGERY"

Practical Suggestions in Borderland Surgery. For the Use of Students and Practitioners. By Gustavus M. Blech, M. D. Philadelphia: Professional Publishing Company. 1910. Price \$1.50.

The author of this little manual is too well known to readers of *CLINICAL MEDICINE* to need an introduction. The present volume may be looked upon as an appeal for sane and rational surgery in that class of affections commonly designated as "borderland" diseases. The author attempts to enable the earnest general practitioner—the occasional operator—to answer properly the great question, when to operate and when not to operate. We believe that he has succeeded.

JACOBI'S "DISEASES OF CHILDREN"

Diseases of Children: Edited by Abraham Jacobi, M. D., LL. D. Translated from "Die Deutsche Klinik" under the general editorial supervision of Julius L. Salinger, M. D. New York and London: D. Appleton & Co. 1910. Price \$6.00.

Although American medical literature is fortunate in the possession of a large number of excellent textbooks on diseases of children, the introduction of a German work on the same subject can hardly be likened to the carrying of owls to Athens or of coal to Newcastle; and this is especially true if the German book carries with it the commendation of a man like Dr. Abraham Jacobi.

The book before us is a translation of a volume belonging to the excellent series of lectures which make up the collection known as the "German Clinic at the Commencement of the Twentieth Century," a series which has, in part, been made accessible to American readers through the initiative of the publishers. It contains contribu-

tions from such men as Baginsky (chapters on diphtheria and pertussis), O. Heubner (chapters on measles and scarlet-fever), Ad. Czerny, A. Monti, Th. Escherich, and from a number of others whose opinions are accepted as authoritative abroad as well as in our own country.

Needless to say that the subject-matter embodies all that is accepted as best on the treatment of diseases peculiar to children or presenting different manifestations in children from those known in adults. The translation is faithful, and if it is, at times, a little halting, this must be attributed to the attempt made to adhere as closely as possible to the style and phraseology of the German authors, which is, indeed, as Salinger says in his introduction, a difficult task.

We recommend the book warmly to our readers, not only on account of the authorities whose opinions it presents, but still more for the wealth of material contained in its comparatively small compass.

McCURRY'S "MALARIA"

Malaria and Its Manifestations. By Dr. J. H. McCurry. Memphis: Press of S. T. Toof & Co. 12mo., 170 pages. 1910. Price, cloth, \$1.00.

Lord Byron complained that poems were judged by their length, and protested that he considered some of Moore's "Erin Sparks" worth all the epics that had ever been written. The same is true in regard to medical books; and the author of a compendious Practice of Medicine ranks higher than the man who utters a monograph. Nevertheless, the Practice may be nothing but a compilation, with scarcely anything original, while the monograph represents a man's work on the one subject to which he devoted his time and attention for years.

Not one of the systematic textbooks published in America has been written by a man who had a real working knowledge of malaria, since all come from the pen and scissors of those whose practice has been outside the malarial belt. To realize the meaning of this, compare the monograph on malaria by Dr. McCurry, who practises in a small town in Arkansas, with the similar chapter in Osler or Anders.

Dr. McCurry discusses the etiology, giving the latest views in excellent form, including the role of the mosquito. He then discusses prophylaxis and hygiene, describes the typical malarial paroxysm, simple, intermittent and remittent, hemoglobinuria, pernicious fever, the surgery of the spleen, and, finally, goes in detail into the treatment of the various forms of this malady.

To those whose knowledge of malaria is derived at second-hand the treatment seems a simple affair, and to be comprised in the single word, "Quinine," but to such Dr. McCurry's book will be a revelation. There is quinine *and* quinine. There are various salts, which have distinct places to fill in applied therapeutics. There is a *time* to give quinine, a *way* to give it. There are also other remedies, such as arsenic and strychnine, to modify its influence. There is the condition of the liver and that of the alimentary canal to be reckoned with. In fact, there is in this little book a great deal of valuable information, of exactly the sort a physician desiring to cope with malaria needs.

WADE'S "MALPRACTICE"

A Selection of Cases on Malpractice of Physicians, Surgeons and Dentists. By Martin J. Wade, Professor of Medical Jurisprudence in the College of Medicine, and Lecturer in the College of Law, State University of Iowa. The Medico-Legal Publishing Company, St. Louis. 1909. Price \$5.00.

The author has, in this single volume of 800 pages, brought together practically every malpractice case of importance which has been decided by the courts of last resort in this country. Several famous English suits are also reported. The cases appear in chronological order and represent not the *opinions* of men writing for the profession but the actual evidence and judicial expression of judges deciding what is legal between physician and patient. A description of the injury or ailment, the treatment given, the result and subsequent complaint are outlined with sufficient detail to enable the physician to understand thoroughly the ground of action. The court procedures and final

judgments may occasionally puzzle (and *sometimes* anger) him, but they will also impress upon his mind the necessity for "walk-in" cannily" and avoiding risky procedures whenever it is possible to do so.

The author points out that questions of fact in civil suits are tried by a jury the members of which are naturally possessed of little or no scientific knowledge. Hence, as the burden of proof to establish "negligence or want of reasonable skill" is always upon the plaintiff, it behooves the doctor to exercise such a degree of care as will impress the *layman* as being reasonable.

The Index by States is especially valuable, enabling the reader to familiarize himself at once with rulings of the courts of the state in which he practises. However, as the rules governing malpractice cases are not local or statutory but by principles of common law applicable in every state, each case reported is valuable as showing precedent and the principles involved.

Malpractice suits are being brought so constantly that it behooves every practitioner to know something of the principles supposed to govern his conduct in the treatment of patients, and there is no better way to avoid error than to be made familiar with the mistakes that have cost other physicians both money and reputation.

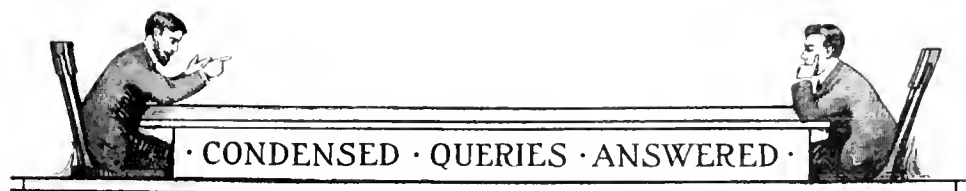
Apart from its legal value, this volume is of extreme interest, revealing, as it does, "the wonderful advance in medical and surgical knowledge from the crude procedures of the barber and apothecary to the modern methods in which learning replaces ignorance and science supersedes superstition."

The book merits and will secure a place in the library of every progressive physician, lawyer and student of medical jurisprudence.

GEE'S "LECTURES AND APHORISMS"

Medical Lectures and Aphorisms. By Samuel Gee, M. D. London and New York: Oxford University Press. 1908. Price \$1.50.

This is, as the title implies, a collection of lectures and aphorisms dedicated to the memory of Sydenham, and it is as attractive in the variety of its contents as it is true in its substance.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

ANSWERS TO QUERIES

ANSWER TO QUERY 5035.—As a doctor who has “the habit” (in this case a good “habit”) of reading carefully your excellent journal, may I suggest—unless someone has already anticipated me—to J. H. L., Query 5035, November, 1910, that he procure a little book by Dr. Struthers, published by Wm. Green & Sons, St. Giles St., Edinburg,

Scotland, entitled, “Notes on Local Anesthesia in General Surgery.” As the book is inexpensive—I think mine cost \$1.00, with postage out here—he will probably find it worth his perusal with reference to regional local anesthesia.

EDGAR BROWNING,

Sherbrooke, Quebec.

QUERIES

QUERY 5053.—“Varicose Ulcer.” C. H. O., Wisconsin, wishes to know if the shale-derivatives are of any use in treating varicose ulcers or whether some other product is more useful in this affection.

A good shale distillate, containing guaiacol and phenol, will prove satisfactory in most cases of varicose ulcer. The conditions present in the lesion itself must, however, modify treatment to a great extent. Stimulation is often essential; in other instances rest and pressure prove beneficial. An oil-bearing camphor, phenol and eucalyptol applied on gauze, proves a very generally effective dressing; a solution of boric acid and zinc sulphocarbolate controls excessive discharge.

In fetid ulcers, cleanse thoroughly with hydrogen peroxide followed by an alkaline antiseptic solution, dry, and apply the antiseptic oil on lint, renewing dressing every second day. A very excellent preparation is ichthyol 1 dram, gelatin 2 drams, zinc oxide 80 grains, glycerin 2 fluidrams, distilled water 4 fluidrams. The solution is heated and painted over the ulcer (which has been

previously cleansed. Warm dusting powders are rarely desirable.

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QUERY 5054.—“Senile Urinary Incontinence. Pruritus Ani.” F. M. M., California, asks us to suggest treatment (1) for a gentleman of sixty in fair health, of spare habit, no bladder or rectal trouble, urine normal, but can’t retain it at night—normal control through the day. (2) Young married man, no bad habits, neither drinks nor uses tobacco; has no rectal or bladder trouble, but an excruciating weeping pruritus around the anus. Nothing perceptible on inside of bowel, but skin around seems to ooze and crack. He has had some internal piles, which were removed. Sphincter was also stretched. Ointments, lotions and internal medication have afforded only temporary relief.

1. Incontinence of urine in the aged is generally due to atony of the sphincter vesicæ. Small doses of hyoscyamine and strychnine valerianate, alternated in particularly stubborn cases, together with cantharidin, usually prove effective. Strych-

nine valerianate, gr. 1-67; hyoscyamine,*gr. 1-250, may be given before dinner, supper- and at bedtime, with cantharidin, gr. 1-5000 every hour for three doses before retiring. Arbutin, gr. 1-6 to 1-3 three times a day, may also be tried. Be very sure that there is no prostatic disorder.

2. In pruritus ani, dilate the sphincter thoroughly, if necessary under anesthesia. Cleanse the area with peroxide of hydrogen, paint with 95-percent carbolic acid and, after a moment or two, neutralize with alcohol, then apply camphor and menthol in petrolatum. As you doubtless know, camphor and menthol liquefy when rubbed up together in a mortar. Equal parts of the resultant fluid and refined petrolatum make an ideal preparation for use in pruritic conditions. A solution of silver nitrate (gr. 20 to the ounce of water) will afford complete relief. The pain caused by the application passes away in a few minutes. The writer has for some time used thuja successfully. In intractable cases division of the sphincter and scraping of the affected area may be required. Fissures must be cleansed and their floor incised with a sharp bistoury. The silver-nitrate solution should then be applied thoroughly. Any redundant skin or hemorrhoidal "tabs" should be removed with the scissors. The urine should be examined in every instance; nearly all pruritic patients suffer from retention of solids.

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QUERY 5655.—"Pes Varus." A. J. W., North Dakota, wishes to be informed whether pes varus in the newborn (both feet) can be remedied by brace alone or, if operation is necessary, when this should be performed. One foot is moderately bent, the other to a severe degree. Deformity is hereditary.

In pes varus of the newborn, treatment is precisely similar to that necessary in equine varus, except that it may not be necessary to cut the tendo Achillis. The operative procedures to be considered are tenotomy, division of ligaments, open incision, forcible correction and osteotomy. None of these are, however, essential when the patient is an infant. Manual manipulations followed by the application of plaster-of-paris bandages and a suitable brace will meet the require-

ments in this instance. The mother should be directed to manipulate the feet, and having rectified the deformity by the use of gentle force, several times daily to hold the foot in the proper position (or as straight as possible) for a few minutes each time. This process should be continued for several months and will restore the feet to normal mobility and position. Retention treatment may then be begun. Mechanical correction has been successfully employed, but it requires much persistence on the part of the surgeon and is not to be advised. The Taylor shoe or the regular splint for equine varus may be used after the period of manual treatment suggested.

Another method is to correct the position as nearly as possible and apply a plaster-paris bandage. Such application requires skill. For technic see Bradford's "Orthopedic Surgery" or Whitman's "Orthopedic Surgery." These authors also outline operative technic minutely. The condition present in the patient will, of course, indicate the necessary procedures. A tenotomy may be performed, with subsequent fixation of the foot, but unless the deformity is very severe we should attempt manual correction with subsequent retention treatment. If operation is to be done it should be performed early.

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QUERY 5656.—"Ingrowing Hair on Negro's Face." S. T. C., Texas, is treating a negro with "enlargements on the face" caused by shaving with dull (and dirty?) razors. I have seen a great many of these fungus-like growths on negroes but never saw any on white people. The negro claims that he has pulled twisted-up hairs several inches long out of these tumors, which are irregular in shape, some one and a half inch long and one-eighth of an inch thick. Sometime since a tumor was painted over with a solution of pyoktanin-blue. It did not dry it up as it will a mole but caused it to fill up with pus. The doctor wants to know what will cure the trouble.

The tumors you speak of are caused by ingrowing hairs and the application of caustics is entirely uncalled for and might produce very disastrous results—even keloid.

The surface of the tumors should be anesthetized with ethyl chloride, the growth incised, the hair, sebum or pus removed, the cavity swabbed with pure carbolic acid, neutralizing in one minute with alcohol, and the wound dressed with aristol-collodion or a good antiseptic dusting powder.

Caustics or desiccants are intended to destroy blood-filled growths, nevi, moles, etc. You have not abnormal tissue to deal with here but an abnormal condition. You do not state whether the tumors are painful or whether they suppurate when left alone. The negro's beard is curly and "ingrowing hair" is not at all an uncommon condition.

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 QUERY 5657.—"Exophthalmos." O. M. C., Virginia, is treating a little girl, twelve years old, otherwise in good health, with exophthalmic goiter. There is a history of goiter in the near relatives. He has been giving calx iodata (1-3 grs.) four times a day with 2 grains quinine hydrobromide. This brought the pulse from 130 to nearly normal, but failed to maintain effect. Elimination and nutrition good. Gland slightly enlarged, eyes only moderately protruding. Heart action is now rapid and pretty strong. Child apparently active, strong, and her appetite good. The parents want to take her to specialists, being scared as to the outcome. The doctor desires assistance.

Exophthalmic goiter (Basedow's disease, Graves' disease) is not very frequently seen in early life, older children and young adults (female) suffering most. The protruding eyeballs, tremors, rapid pulse and enlarged thyroid are diagnostic. Early there may be any one of these symptoms—rarely two—but quite often weakness, headache and lassitude alone mark the beginning of the disorder. Struma is general and tachycardia the rule; throbbing of the carotids and temporal arteries will almost always accompany the enlargement of gland; exophthalmos may be an early feature or appear late; occasionally it is practically absent. In childhood the thyroid enlarges more rapidly than in the adult. An entire change in the child's disposition will be noted, and diarrhea, vomiting, anorexia, hysteria, excessive perspiration and irregular fever may cause the parents to bring the

child to the physician. Naturally, in such cases a diagnosis is not easily made, but close observation should lead to a correct decision.

The earlier treatment is begun, the better. Hyoscyamine, gr. 1-500; ergotin, gr. 1-6; and iron iodide, gr. 1-67, should be given three times daily between meals. Half an hour before food give avenin, gr. 1-3, and two desiccated thyroid tablets or a medium dose of the extract (glycerinated). After food, arsenic bromide and arsenic iodide (gr. 1-67) are alternated week and week about till slight signs of arsenical sufficiency are noted. Then substitute rumicin and iridin, gr. 1-6 each. Return to arsenic after two weeks. Cactin may be indicated for a time, and sodium salicylate, grs. 5 to 10, t. i. d., will sometimes give great relief in marked cases. The quinine hydrobromide with ergotin, as advised by Forchheimer of Cincinnati, does splendid service in many cases.

Rest is essential, and salt sponge-baths, massage and general vibration prove beneficial. The sinusoidal current has been said to exert an almost specific influence. A serum from thyroidectomized sheep or goats has also been lauded lately. In my own hands it has proven inert, but as half a dram must be given every four hours for months, it may be that I did not persevere long enough. The treatment outlined has invariably proved markedly palliative at least in one-third that time. When the cardiac symptoms are excessively pronounced (beating of carotids, "swimming of head," tachycardia, etc.) a few doses of hyoscyamine, followed by gelsemin, give immediate relief. Strophanthin, gr. 1-134 every four hours, often controls the pulse. Aconitine and veratrine must be given with caution and temporarily only where distinctly indicated. The use of the sinusoidal current should on no account be omitted. Some cases require surgical intervention. If you desire further assistance in this case, Doctor, do not hesitate to call upon us.

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 QUERY 5658.—"Hyperchlorhydria and Threatened Miscarriage." C. H. H., Illinois, asks advice in a case, the salient features of which he describes briefly as follows: A woman, 32 years old, of spare

build, and weighing about 110 pounds, has miscarried twice in the past two or three years and is now in the sixth month of her third pregnancy. There is an antelexion of the uterus, and patient suffers so much with sour stomach that but very few articles of food agree with her. She has severe attacks of pain and cramping in stomach. Relief is only secured by washing out stomach and bowels. She has been very constipated for several years, but tries to keep bowels as nearly regular as possible. She complains at times of pain in back, extending round toward groin, pain in top of head and other peculiar feelings about the head which she is unable to describe. There is irritation at neck of bladder causing a frequent desire to empty bladder, also soreness and stiffness of lower limbs and about the hips. No albumin in the urine by heat and nitric-acid test, specific gravity 1018 to 1020. All treatment so far has failed. Patient is very anxious to have a child and her inability to eat sufficient food is having a serious effect on nutrition of fetus. There does not seem to be as great enlargement of the abdomen as there should be at this stage of pregnancy.

It would be well if the stomach is still being washed out and the passage of a tube does not cause violent retching (which might prove disastrous), to give her a Boas test breakfast, i. e., two slices of toast and a cup of weak tea, securing the stomach contents an hour later and forwarding the same to the laboratory for examination. A 4-ounce specimen of her urine should also be sent.

You do not state at what period pregnancy was terminated in the two prior instances. If the sixth month has been passed in safety it seems to us that with a little care she can be brought safely to term. The antelexion should have been corrected before pregnancy occurred. As it is, the use of a properly fitting abdominal belt might prove advantageous. The bowels should be kept thoroughly clean, saline enemata being used to remove scybala and castor oil administered in sufficient quantity each night to secure a free defecation next morning.

The patient should spend a great many hours each day lying on her back with the

hips elevated, and never rise to her feet unless the supporting belt is in place. The vague "head pains" that you mention are due chiefly to malposition of the uterus and are reflex in character. Acidemia (auto-toxemia) is also undoubtedly present. Starchy foods should be limited and albuminous substances ingested in small quantities at three-hour intervals. Carbonate of sodium, rhein and hydrastin may be given to control acidity. Diastase and papayotin will prove efficient aids to digestion. Some of the peptonized foods might be given with advantage and prepared bovine blood with grape-juice tried.

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QUERY 5659.—"Carcinoma Uteri." P. M. H., Texas, wishes us to describe the latest and best medicinal treatment for carcinoma uteri.

There is no "medicinal" treatment for carcinoma of the uterus. Prompt extirpation of the affected organ and adnexa is essential. Pain may be relieved and the patient kept fairly comfortable by the hypodermic exhibition of hyoscine hydrobromide and morphine. Very hot alkaline antiseptic douches should be given each night on retiring and the vagina packed with strips of gauze, the upper ends of which are saturated with some antiseptic oil. One part of carbazol or ichthyol to two of fluid petrolatum proves satisfactory. Ten drops of oil of cinnamon may be added to each ounce. This preparation has an anodyne action, removes odor and materially lessens discharge.

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QUERY 5660.—"Is Calcium Lactophosphate a True Salt? Jaborandi Applications to the Scalp." M. K. E., New Jersey, notes that we speak of calcium lactophosphate as a true salt and asks if we mean to imply that this particular preparation alone is a "true salt" and differs from the products of other manufacturing chemists? Our correspondent is under the impression that to produce any effect on the system this salt of calcium must be taken for a long time, as it is not assimilated quickly, and wishes to know if there are not other preparations which will produce the identical results more rapidly? For instance, for phosphorus effect

lecithin, adding lime to get the calcium effect; or glycerophosphate of lime, alone.

We are also asked to express our opinion of jaborandi as an application for the scalp; whether a strong preparation would have any irritating effect on the scalp and how much should be added to 8 ounces of distilled water? If alcohol is necessary in the above, what is the minimum quantity? If it is desirable to add quinine to the mixture, would it be best to use the dry quinine and how much? Is there any preference between the tincture and fluid extract of jaborandi?

Calcium lactophosphate is a double salt of calcium. There are so-called calcium lactophosphate tablets on the market containing no calcium lactophosphate (true), but a mixture of calcium lactate and calcium phosphate—a very different thing! Calcium lactophosphate under certain conditions is assimilated by the system rapidly. In neurasthenia, phthisis pulmonalis and other conditions in which lime is deficient in the system, it produces very prompt results. Instead of giving large doses, however, the small dose at frequent intervals proves most satisfactory. Occasionally the combined phosphates of sodium, iron and manganese prove preferable. Grain 1-12 each of iron, magnesium, potassium and sodium phosphates, with nuclein, 2 drops, is an excellent combination for use in pediatric work and wherever prompt reconstruction of the cell is essential.

Pilocarpine proves preferable to the fluid preparations of jaborandi in remedies intended for application to the scalp. Ten to twenty grains of pilocarpine hydrochloride and one dram of quinine hydrobromide may be added to four ounces of rose water. A little glycerin proves an effective addition. Nearly all lotions used in the treatment of alopecia will be improved by the addition of pilocarpine, a few drops of tincture of cantharides to each ounce adding to the efficacy of the preparation. A very small quantity of alcohol will suffice—1-2 dram to the ounce of solution. An unguent is often preferable to a lotion. For instance; pilocarpine, 30 grains; quinine hydrobromide, 1 dram; lanolin, 1 ounce; petrolatum, 1 ounce; tincture of cantharides, 10 minims.

QUERY 5661. "Septic Arthritis." O. L. A., Missouri, gives the following brief clinical report and asks for therapeutic suggestions.

"Female, 23 years of age, of good family and high standing. She went to the city to work and while there became pregnant, also contracted gonorrhea, and in some way had a miscarriage at about five months. This was about a year ago. After the miscarriage, all information is negative for a month as she claims she does not remember anything during that time. However, one month after that occurrence she was taken to another hospital suffering from 'rheumatism,' and for nine months could not move hand or foot. Her parents brought her to my home town and I have been treating her for almost two months. Her right arm, elbow and left knee are stiff, but there is very little swelling and scarcely any tenderness. I have been giving her, internally, phytolacca, sodium phosphate, and blood alteratives. Have been massaging elbow and knee and applying hot libradol (Lloyd's). Her urine is in very good condition (normal). She is up and walks without crutches. The gonorrhea is cured so far as I can tell."

It is difficult for us to prescribe intelligently in this case as the underlying conditions are obscure. A blood smear should be forwarded to a competent pathologist together with a specimen of any uterine (not vaginal) secretion.

Can you readily flex the joints without causing pain? If so, to what extent? Any friction sounds or creaking upon making flexion? Is extension of the limb painful or does an end-to-end pressure of the bones cause the patient to complain? Is there any gross disorder of the pelvic organs, or enlargement of the liver? Has the patient lost weight? Is the skin inactive or discolored?

If at all possible, discover what caused the "miscarriage." A septic condition may have been set up at that time. It is a question whether the woman suffered at all from "rheumatism." If she did, it was most likely gonorrheal in type.

We should be inclined to saturate the patient with calcium sulphide, giving arsenic iodide, grain 1-67, after meals. Then we

should apply to the affected joints, at night, compresses wrung out of a hot solution of epsom salt. The compresses should be covered with rubber protective and flannel. In the morning the parts should be thoroughly massaged with thymol iodide in petrolatum or iodine-vasogen, then covered with hot, dry flannel. Every third day inunct one dram of unguentum Credé (colloidal-silver ointment).

If you have a vibrator, use it frequently. Maintain hepatic activity and free elimination. Iridin and stillingin before meals and a morning laxative saline draught are indicated. This, of course, is basal treatment only, which should be modified to meet the conditions present.

QUERY 5662.—“Colitis” C. V. L., Illinois, sends a specimen of feces voided by a woman, 63 years of age, who has had a constant diarrhea for three months, while for nine months previous to this there was looseness of the bowels. He is not sure whether it is a case of proctitis or colitis, and desires diagnosis and treatment. The stools are always watery and must be evacuated every hour during the day and every three hours at night when in bed. No fever, wasting, pain or any known kidney trouble exist, nothing but the diarrhea, great thirst and an enfeebled condition. The patient has exhibited slight mental deterioration during the past year.

The report of our pathologist shows that the patient suffers from colitis. For this condition, a very efficacious basal treatment is to give a full grain of emetin, taken dry, at bedtime, the patient retaining the recumbent position thereafter. If the medicine is vomited, the dose should be repeated the next evening. Copious green stools will be voided the following morning, when the bowel may be flushed with this solution: Aqueous extract of calendula (or calenduline), 1 ounce; extract of hydrastis (colorless), 1 ounce; extract of hamamelis, 1 ounce; water, 1 quart. One-half of this solution should be thrown into the colon through a tube passed very carefully, with the patient in the knee-chest position. Retain the fluid as long as possible by pressure upon

the anus. Repeat the enema forty-eight hours later.

Internally, give hydrastin, collinsonin and hamamelin, 1-3 grain of each, every three hours. Also, hyoseyamine, 1-250 grain three times a day. Diet very carefully. In some cases copper arsenite and nuclein prove almost specific, and they may be alternated with the hydrastin combination. Have your patient wear a flannel band around the abdomen.

QUERY 5663.—“Alopecia Circumscripta.” S. M. McL., Illinois, wishes to know the best treatment for alopecia circumscripta that has continued for about seven years, off and on. About a year ago the patient's hair began falling out in little patches, then growing again, but white, gradually however, getting black. One eyebrow is almost entirely gone. The patient is a man of about thirty-four, in good health, has no specific disease, smokes moderately, and drinks a little beer at times, but not to excess.

Wash the head thoroughly with a good germicidal soap three times a week, then apply to the affected spots some of the sulphur-bearing shale derivations (ichthyol, carbenzol, lignol are representative types), applying the fluid with a cotton swab and rubbing it in lightly. The next morning cleanse the spots with a little warm boric-acid solution, dry, then apply the following lotion: Mercury bichloride, 5 grains; resorcin, 5 drams; boric acid, 5 drams; glycerin, 4 fluid ounces; alcohol, enough to make 8 ounces. Reapply this lotion at night, the soap and shale derivative being used only three times a week at first, then every third or fourth night.

If this procedure does not prove effective within a month or so, leave the scalp alone for two or three days and then send two or three of the hairs plucked from the margin of the infected area and also a scraping from the scalp itself, placed between two glass slides, to a reliable pathologist. You might, with advantage, give the arsenates with nuclein, while making sure to maintain thorough elimination, watching the urine carefully.



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The Thorny Path of Reform

THE careers of the world's great reformers have been strikingly similar.

That of Jesus may be taken as an example. Beginning in an humble way, the innate divine truths He promulgated attracted attention and won the enthusiastic support of the masses; the movement grew to such proportions that it compelled the attention and the opposition of those in power, and, as to Himself, ended in His death. But the movement thus started progressed His principles gradually permeated the masses of mankind, and now, after the lapse of twenty centuries, their progress seems to be more decided and general than ever before.

The same course followed the efforts of the Gracchi, of Rienzi, Masaniello, Wickliffe, and nearly all other political and social reformers.

In modern days the recognition comes quicker. Darwin and Lecky were fortunate enough to see the tide turn in their favor during their own lifetime, instead of having to wait for posthumous honors. Nevertheless the principle remains true.

The reasons are not far to seek, and may easily be apprehended by a study of human nature for any epoch, place, race or occasion. The American people is peculiarly difficult to stampede. It is made up of many dis-

cordant elements, and it must not be forgotten that it is an aggregation of heterogeneous individuals, not at all a homogeneous mass. Take the present Rooseveltian crusade, his attacks upon greed and graft—how do they affect the average individual, or rather each concrete individual? We admit moral principles in the abstract, but when it comes to applying them in our own individual cases it is different. The man who "believed in" the Maine Law, but was "against its enforcement," has many confrères. When an attack is made upon trusts and graft, every man acknowledges their evils in the abstract, but each quickly begins to ask how this applies to himself personally and to his own conditions.

It is unsafe to attribute to men the rule of altruism as a matter of course. Mr. Roosevelt may feel that he is absolutely right. He may feel it with every fiber of his energetic nature. He may feel that he is demonstrating it to the community in such a way that not even the man of most limited intelligence can fail to see it exactly as he does. But it by no means follows that the man is right in this, or that, seeing it thus, he will act upon it. To many men there is a decided difference as to whether they are being grafted upon or whether, somehow or other, they are getting a little share of that graft

I know perfectly worthy citizens, men who are upright in their dealings with their fellow men, fully up to or above the average of good citizens, into whose pockets, nevertheless, there comes a trickle of coin from a trust, yet, sad to say they are peculiarly reticent on the subject.

When the powers of this earth are arrayed on the side of the Wrong, it is extraordinary how many men can be reached by influences wielded by these powers. The community will not, by any means, be found a unit on the side of the Right, and the opposition is apt to loom up more formidably than we like to realize.

Then, again, with those who are not interested, there is a wide difference between hearing or even believing the revelations or the animadversions of the reformer, and acting upon them. Men cast about cautiously to learn how they themselves are going to be affected, whether possible harm may come to them by accepting the new doctrine and joining the new movement. Many wait to see "which way the cat jumps," unwilling to come out into the open prominently, to serve as a target for possible missiles from the enemy's line.

But beyond this there is a vast mass of conservatism to be reckoned with. Men may acknowledge the evil, but they are not yet convinced that the remedy offered will prove successful. We have worked more than a century under the old constitution, and it may be that some revision will adapt that glorious document more accurately to modern needs and conditions. But when you begin to revise, where are you going to stop? Who knows whether this revision may not carry us completely out of our moorings and into worse conditions than the present ones? We have become accustomed to the old constitution. We have adapted ourselves to its workings—have adapted it by our interpretations to present needs. Are you *quite* sure that the proposed changes will not develop new evils in their turn?

The old parties may be eaten up with graft, yet, after all, they have stood for something; and the spirit of change which leads to the proposition of new ones may go much further than we would willingly sanc-

tion. Take the numerous journals which preach what they term "new thought;" they certainly point out many evils in the working of our social system. but they nearly always also preach antivaccination, and antivivisection, and anti-drugs, and antimedical education, and a whole lot more antis which sensible people would not care to advocate.

The truth of the matter is, that reform is an individual matter. Every human being must consider with himself as to the right or the wrong of these new propositions and try to conform his actions thereto. Rectitude is strictly personal. The hope of the world lies in the cultivation of the individual conscience. Progress may be enhanced by a wave of emotional enthusiasm sweeping over the country and carrying it headlong in the right direction; nevertheless, no such movement has ever occurred but that the immediate effects have been largely neutralized or wholly lost in the reaction which followed. The French Revolution was succeeded by the despotism of Napoleon, which inflicted more bloodshed and suffering than had the whole line of monarchs from Clovis down to Louis XVI. But the principles which prompted that fiery outbreak have continued to permeate and influence mankind in a continually widening circle, and the end of the movement is not yet in sight.

The duty of every one of us is plain. First comes the duty of investigation. Next comes that of thought, of considering, of appreciating, comprehending, arranging and combining the material we have gathered, of forming our conclusions and satisfying ourselves as to what is right. Then comes the duty of promulgating our newly formed beliefs, of correcting, expanding and controlling them by discussion and comparison with the work of others.

Rest assured that truth is as indestructible as is matter, and that the seeds we implant in our neighbors' minds will germinate and mature in time. The results of our work may not be apparent at first. The seed planted in the fall lies hidden until the revivifying influence of the spring's sun arouses it to activity; nevertheless the seed is there, with all its wonderful possibilities.

The principal thing is, to be sure we are right, that they are indeed truths which we

are preaching and not possible errors. The heart of mankind is right, and it responds to appeals for the right. Each in his own way is, after all, striving upward; but as each has his own nature, his own environment, it is not to be expected that all should look upon any matter in exactly the same light.

The text of my preachment, therefore, is a warning against impatience and discouragement. The important topic for our study is not so much how *we* see things, as how to induce our neighbor to see them as we do. We must study his mind and his conditions, in order to make effectual our propaganda of the right.

Cleave then to the sunnier side of doubt,
 And cling to Faith beyond the forms of Faith!
 She reels not in the storm of warring words,
 She brightens at the clash of "Yes" and "No."
 She sees the Best that glimmers through the Worst
 She feels the sun is hid but for a night,
 She spies the summer through the winter bud,
 She tastes the fruit before the blossom falls,
 She hears the lark within the songless egg,
 She finds the fountain where they wailed "mirage."
 —Tennyson.

THE STRAIN ON THE MODERN STUDENT

In the dailies we read that a senior student of the University of Pennsylvania Medical Department died from drugs taken to sustain him while preparing for examination. The coroner of Philadelphia is quoted as saying: "We have discovered that nearly three-fourths of the students in the College are drug users. This statement applies to practically every department in the College. While not all use the drugs regularly, nearly all take some stimulant during the examination period. The favorite drug for students during examination is strychnine. They cram for nights at a time and then go into the examination room just about chuckful of strychnine. It is a wonder we do not have more sudden deaths."

Allowing generously for exaggeration, there is probably enough truth in these statements to warrant us in giving the matter serious consideration. For a number of years examining boards, committees on education and similar bodies have vied with each other in increasing the demands upon the student. More study, more hours, more years, more preliminary requirements,

more rigidity in exacting these requirements to the letter has been the cry all along the line; and that body of men, that board of examiners, which carried the standard most highly and rendered it most nearly impossible for any candidate to pass was vaunted as the most worthy.

It is impossible to increase the capacity of the human mind by legislative enactment. While certain individuals may distinguish themselves by their brilliant achievements, the mass of humanity progresses far more slowly. A large percentage does not progress at all. A standard which is founded upon the qualifications of the very highest would seem unsuited when applied to all. Let us see what has been the effect of this practice.

In Germany, organization has been carried to the extreme. Every German is a cog on the wheel, and lives, moves and has his being as the Government directs. Every German child is educated whether he will or not. No matter what his varying capacity, he is educated by force. I have heard it asserted, although I cannot now lay my hand upon the statistics in proof of it, that in modern times there has been an increase of insanity and suicide in Germany. In other words, through the system of forced education a constantly increasing proportion of Germans find themselves unable to withstand the strain, and fall out by one of these routes. If true, there is an added significance to the statement in regard to the use of stimulants by medical students in Philadelphia.

Do the people want such highly educated physicians? Do they all want them, or do the masses prefer men not so widely separated from themselves in qualifications? Is it not natural that the more highly the standard of medical education is elevated, the wider the gap between the profession itself and the bulk of the people, the greater will be the development of irregular practitioners who, springing from the masses themselves, dispensing with the long and painful course of training now thought requisite to develop the physician, standing closer to the people, are in more immediate sympathy with them and their needs, comprehend them and are comprehended by

them more easily, and intercept the bulk of the practice?

The medical students of the University of Pennsylvania are supposed to be of as high grade as those of any medical college in the United States. The requirements of this college have always been among the highest. It has been a school in which money and brains have been the two requirements, and no medical college in the United States has stood higher in the modern scale. But if a medical education means anything, it begins with the student himself, and teaches him that work must be limited to the working capacity, but not pushed beyond it.

If only a fourth of Coroner Ford's assertions are true, what a light is thrown on the system of education of this institution, and that means on that of every other institution which has developed the highest standard in medical teaching. In order to keep up with this standard, Coroner Ford says, nearly three-fourths of the students in the college use drugs. It matters little what drug is used, for the principle is the same; the difficulty underlies all, and the student who can keep up with his classes only by using strychnine or coffee stands on a par with that one who is overworking his brains to such an extent that reliance on alcohol or morphine is forced upon him.

In connection with this, take the oft-repeated assertion that the vast proportion of the medical profession are morphine-habités. Here, also, we may divest the assertion of exaggeration, and ask ourselves, how much truth underlies the charge. A physician who was graduated from college twenty or thirty years ago is called upon to hold his own with the newest products of the medical school, who, stimulated to the utmost by strychnine and perhaps morphine, and adept in the latest developments of medical science, is thrown into the community to compete with the man who for a quarter of a century has been engrossed in the treatment of the sick. Must the whole profession betake itself to morphine or whisky to keep up with these artifact accretions?

If this is so, is it worth while? Would it not be as well to wait a little, until the

masses catch up, before pushing our advances in medical education to such an extreme?

We talk of preventive medicine, that it is the practice of the future, and every orator has something good to say about it. We admit without a question that hygiene stands in the front rank of therapeutics. But why do we not practise it? Is it practising hygiene and preventive medicine, if in the preparation for the practice of medicine three-fourths of our students in the best colleges in the country are compelled to stimulate their brains with drugs in order to keep up to the mark? Is *that* preventive medicine? Is *that* hygiene?

But, if these young men do not learn to apply preventive medicine in their own cases, how can we expect them to be adept in the practical application of the laws of hygiene to others? Is it not the first qualification of a medical practitioner to demonstrate in his own person his practical knowledge of the science and art of the medical profession? The caricaturists have often ridiculed the efforts of the bald-headed man to sell hair tonics, but how about a mental and physical wreck attempting to lead the people along the ways of hygiene?

The Lord who made sparrows and Katy H. Dids, loves the man who is stalwart and brave, who cheerily goes to his wife and his kids, though his hopes may be fit for the grave; the Lord he's no use for the twenty-cent skate, whose courage is as weak as the foam, who piles up his sorrows, and shoulders the weight, and carefully carries them home.—Walt Mason.

PHYSIOLOGIC REACTION TO DRUGS

They who utilize the active principles are prone to insist that the principal reason for their preference is that from these definite and uniform agencies they get definite and uniform results. In other words, while they may *guess* with fair success what the effects following a dose of, say, nux, opium or cinchona may be, they *know* what will follow a certain dose of strychnine, morphine or quinine.

But this is only relatively true in practice: for while the effects of a mathematically measured dose of such a therapeutic certainty is always the same, the reaction of each patient to it differs with the individual.

Nobody could doubt that while a quarter-grain of morphine might be taken with impunity by a healthy man, it is capable of doing mischief to a neurasthenic woman. But beyond this there is a difference in human beings not to be explained by such obvious considerations.

Here is an example: A physician, desirous of having a tooth extracted, applied a local anesthetic to the gums. The extraction was painless and no ill effects followed. Another man applied the same anesthetic, but the pain increased so fiercely that he injected, hypodermically, a tablet of hyoscyne, morphine and cactin, under the influence of which the extraction was accomplished painlessly. In this case there was a difference in the pathologic condition, for in the second patient there was an abscess attached to the tooth-root, while in the first case there was not.

However, in other instances no such a difference can be recognized. Many cases have been reported demonstrating the power of atropine as a hemostatic. Nevertheless, a clinician reported that for a uterine hemorrhage—metrorrhagia—he administered atropine, 1-100 grain, hypodermically three times within a short period, without controlling the bleeding. No evidence of therapeutic action was apparent except a slight and dubious dilation of the pupil. The atropine tablets were believed to be of good quality; and assuming this to be true, we have a curious instance of idiosyncrasy in the form of insusceptibility to this powerful alkaloid.

Incidentally, this case goes far to prove Waugh's theory as to the mode of the action of atropine in such cases. Dr. Waugh, it will be remembered, holds that atropine increases capillary attraction by actively stimulating the vasodilators. The capacity of the veins is about five times more than that of the arteries, the capacity of the capillaries seven hundred times more. Even slightly increase the attraction of the capillaries for blood, and the tension of the arteries will be lowered, and the tendency of the blood to flow out of the patulous vessels will sink until the hemorrhage ceases. If the dose of atropine given is not large enough to dilate the capillaries, no hemostasis fol-

lows, as in this instance. If atropine increased the coagulability of the blood or directly contracted the wounded vessels, failure would not have ensued in the case described.

Why, then, did this patient show such insusceptibility to atropine? We can not explain this, and merely restate the fact in other terms, by suggesting that certain parts of the nervous system are more resistant to influences than others. We are never built like Holmes' "one-hoss shay," but everyone of us has his *locus resistentie minoris*, as also, conversely, his *locus resistentie majoris*.

Possibly we may get a faint hint from the conception of chemotherapy, which is based upon the observations in the staining of biologic specimens. Here we observe that different tissues exhibit a selective affinity for certain chemical bodies, while not attracting others.

So, it is quite conceivable, indeed is conjectured, that certain remedial principles are capable of uniting chemically with the protoplasm of given tissues but not with that of others, a modification of physiologic manifestations naturally resulting. More physical than chemical is the action of the volatile anesthetics, which are now believed to dissolve from nerve-cells certain fatty bodies—lipoids—thus causing temporary nerve incapacity. All this, however, goes far to suggest caution in making promises—and the wisdom of pushing a well-indicated dosage to the point of effect.

Withal, such cases are exceptional. The individual differences are usually considerable, and the precision of the active-principle therapy is uniform enough to render this fact one of the most striking advantages of the method. In the course of his many years' active practice, the foregoing is the most marked case of insusceptibility to atropine in an adult that has ever come to the writer's attention. To base a therapeutic precept upon it would be as ill-judged as was one physician's objection to the use of hydrogen peroxide in diphtheria. The inestimable advantages of this agent here were given up merely upon the expression of a fear that it might possibly act injuriously on the healthy mucosa.

Let us not make a similar mistake of judgment with atropine.

What does it matter where a man is from? Is it fair to judge a man by his post-office address? Why, I have seen Kentuckians who hated whisky, Virginians who were not descended from Pocahontas, Indians who hadn't written a novel, Mexicans who didn't wear velvet trousers with silver dollars sewed along the seams, funny Englishmen, spendthrift Yankees, cold-blooded Southerners, narrow-minded Westerners, and New Yorkers who were too busy to stop for an hour on the street to watch a one-armed clerk do up cranberries in paper bags. Let a man be a man and don't handicap him with the label of any section.

—O. Henry.

THE PARCELS POST

Do you want it? If you do, then now is the time to make your wants known through your congressman. It certainly seems strange that our country is practically the only "civilized" one that is without it. And stranger still, we have a parcels-post arrangement with other countries, but not for the convenience of our own citizens. Thus, we can send an eleven-pound package at the rate of twelve cents a pound to Prussia or farthest Patagonia, and the citizens of either of those distant countries can send packages to us at the same rate; but such is the irony of business politics, it costs us here in Chicago *sixteen* cents a pound to mail a bundle to Aurora or Milwaukee or the nearest hamlet, and then the limit of weight is four pounds instead of eleven, as in the case of foreign lands. That doesn't seem just fair. What do *you* think?

The main opposition to the parcels post in this country comes from two quite different sources and rests entirely upon class interests. To be specific:

First, and most powerful, in this antagonism are the large express companies. These are making millions on the money actually invested—some of them several hundred percent, so it is said. Naturally they do not wish to be interfered with, and they have influential friends in Congress who make it their business to see that they are not.

Second, there are the thousands of tradesmen in the smaller cities, towns and villages of the nation who have felt the severe competition of the great mail-order catalog

houses. The establishment of the parcels post, especially on the rural free-delivery routes, would give a larger competitive opportunity to the latter concerns, who would then be enabled to deliver their goods at the farmer's door, and at prices which the local dealer could not meet.

The result of this, so it is argued, would be the destruction of the business life, and with it the crippling of the social life, of many thousands of small communities. It is assumed that many a prosperous town would be ruined if the parcels post should become effective, and, furthermore, it is asserted that these cheap postal rates would foster the development of an enormous mail-order trust, draining the rural communities of their capital and population and aggravating the evils of centralized wealth and municipal congestion.

In answer, it might be said that every improvement in means of communication and transportation has been opposed, because, presumably, it had exactly the same tendency as the parcels post. We need but to review the arguments against the replacement of the stage-coach by the railroad, seventy-five years ago. These objections seem funny now, but they were mighty serious then.

The building of trolley lines has been fought by many country merchants on exactly the same grounds. Every reduction in railroad fare that makes it easy for the country purchaser to get to town, or of freight rates, that reduces the expense of shipping goods from the city to the country, might be opposed on these same grounds. The telephone, the telegraph, every agency that annihilates distance or makes for ease of communication has the self-same effect; yet, disaster—in spite of all the evil prophecy—has never followed such progressive movements. There has simply come about a readjustment to meet the changed conditions, and society, as a whole, has been bettered by them.

It is inevitable that the purchaser should seek to buy in the cheapest market, and the seller to dispose of his wares in the dearest. In this competition, it is also to be expected that the middleman (retailer and jobber) should eventually suffer, for anything that brings producer and consumer closer to-

gether hurts him, though it fits in exactly with the tendencies of economic law. Thus, for instance, the jobber's business was built up *because of* the remoteness of the retailer from original sources of supply. When that remoteness ceases to be a factor, then the necessity for the jobber becomes correspondingly less.

There are millions and millions of people who *must* buy the necessities of life at the lowest possible prices. However friendly their relationship with the merchants of their communities, they *must* defend their own interests if they desire to prosper themselves. This class of our people, which in fact comprises the bulk of the population, cannot be expected to *oppose* any movement which would directly have the effect of cutting down the cost of living while at the same time, through the reduced cost of delivery of their own product to *their* consumers, such change would materially add to their net incomes. They would be foolish were they not to endorse it and fight for it.

The threatened "trust" can only survive so long as it gives greater service at a lower price, and in all probability it is but the precursor of some more effective form or forms of civic cooperation.

Therefore, as promising the greatest good to the greatest number, the parcels post is to be commended. On the whole, the tendency of this institution is, presumably, to increase the prosperity of the laborers—whether on the remote farm or in the city shop; and, after all, these are the *producers*, the bone and sinew of a people, while the distributors, or middlemen, in excess of actual necessity, are economic parasites. It is natural and right that the manufacturer and consumer should be brought just as close together as possible, and the parcels post is a means to that end. The physician's interest is that of the people as a whole. His prosperity depends upon their prosperity. Certainly, he should lend all his influence to making the parcels post a reality and of widest utility.

The half-way measure proposed by the Postmaster General, which would make the parcels post effective only on rural-delivery routes, is defective, but, for all that, may be like the proverbial "half loaf." Why not

discuss this topic in CLINICAL MEDICINE? Who has something to say?

Against the threats

Of malice or of sorcery, or that power
Which erring men call chance, this I hold firm:
Virtue may be assailed, but never hurt,
Surprised by unjust force, but not enthralled:
Yea, even that which Mischief meant most harm
Shall in the happy trial prove most glory;
But evil on itself shall back recoil,
And mix no more with goodness.—Milton's *Comus*.

THE FUTURE OF PHARMACOGNOSY

The Eclectic Medical Gleaner reprints a portion of Tschirch's address delivered at the opening of the School of Pharmacy of the Pharmaceutical Society of Great Britain. In this presentation Prof. Tschirch predicts the speedy return to the use of drugs, and especially to those drugs elaborated by the chemistry of nature. He says: "When medicine has thoroughly ruined the digestion with synthetic remedies, and tested all the organs of the animal body, it will return once more to drugs, and employ them to a greater extent than it does at present. It will return to the most ancient remedies of mankind, to the medicinal plants and drugs."

In another place he speaks of the use of the whole drug in a manner so contradictory as to show that the matter was not clear in his own mind. He says that "when the isolated active principles are tested pharmacologically, it becomes evident that their action does not correspond with that of the drug itself, for the latter scarcely ever contains a single active constituent."

This is very true. However, the only instance which he names is rhubarb, which, as he says, in addition to laxative anthra-glucosides, contains astringent principles, and owes its therapeutic use to the simultaneous occurrence of these two antagonistic groups of substances. But he does not add, and neither does *The Eclectic Gleaner* in its editorial comment, that, this is almost the only illustration of this fact that can be adduced in the entire vegetable *materia medica*. In the face of this, he goes on to acknowledge the correctness of the position of the active-principle advocates by recommending experiments in cultivation to ascertain the means of increasing the amount of

the active constituent of the medicinal plant which is desirable. He speaks of the cultivation of cinchona to produce a bark rich in quinine, and of opium to secure an exudate poor in narcotine, and advises similar experiments in the cultivation of digitalis and belladonna.

One can prove almost anything by quoting fragmentary and detached portions of one's remarks. It is impossible to get away from the truth, and that is, that the single active principles have been more completely studied and tested, their action is more exactly known and may be predicated with more certainty than that of any other remedies in existence, excepting the correspondingly chemically pure salts issued from the laboratory.

It will be long, however, before this idea of the whole-drug effect is completely dissipated. As long as it is advocated by such a brilliant genius as John Uri Lloyd, it will prevail mistily in the minds of a certain proportion of the profession. The cold fact that there is no such thing as "the whole-drug effect," but that what is called such is the effect of the combination of all its active principles, cannot be denied, and since these exist in each separate plant in different proportions, it follows, necessarily, that the effect of each plant differs from that of all other plants of that variety, and it is only a matter of guesswork and experiment to ascertain exactly the effect to be obtained from each and every new specimen of the drug.

Again we say, if there are remedial values in the minor alkaloids or glucosides of any plant, let us have these principles isolated, tested, and given to us in chemical purity, that we may use them when we need them, in such doses and proportion as we desire, and not be compelled to rely upon their chance presence in the plant; for be it remembered always that the active principles are developed in plants for their own individual uses, and not for the benefit of other creatures, not even man.

Many other interesting points were mentioned in this address. The author refers to the investigations, by Kobert and others, of the saponins, the cyanogenetic glucosides, and the oxymethylantraquinones; also to

the animal substances found in plants, such as cholesterin, cholin, succinic acid and urea. One of the greatest surprises of Tschirch was his discovery that glycyrrhizin was an ester of glycuronic acid, an acid which plays so remarkable a role in the animal economy. This was totally unexpected, for the most varied sugars are at the disposal of a plant if it wishes to form glucosides. Then he treats of the tenicides as containing a phloroglucin group. He also advises more attention to be paid to the insects which destroy vegetable drugs.

Altogether, there is much interesting matter in this address. The reader may find it in *The American Druggist* or reprinted in *The Medical Gleaner*.

'Tis easy to be a friend to the prosperous, for it pays; 'tis not hard to be a friend to the poor, for ye get puffed up by gratitude and have your picture printed standing in front of a tenement with a scuttle of coal and an orphan in each hand. But it strains the art of friendship to be true friend to a born fool.—O. Henry.

THE CRITIC AND GUIDE

I know of no man who possesses in such a marked degree the faculty of condensing a fact or an argument into a single paragraph—sometimes a single sentence—and driving it home with a force that fixes it indelibly upon one's brain, as Dr. W. J. Robinson of *The Critic and Guide*. And the things about which he talks in his journal are not the trivial things; they are the living issues in medicine, especially in its sociologic aspects, pulsating with the life blood of a man who thinks strongly and speaks freely, as mind and heart dictate.

I was especially struck with the November number, which handles the sex question, from many points of view, in at least a dozen different editorials and articles, and absolutely without gloves. In December in addition to more and equally interesting articles on sexual topics editor Robinson devotes special attention to the quack and his atrocities. And, by the way, Dr. Robinson's story of "A Visit to the Rockefeller Hospital," in this issue, is a prose epic, which will stir your heart.

The Critic and Guide is filled with the kind of talk that the doctor needs. He needs

knowledge, all he can get of it; but he also needs the prod, the lash, that he may be *compelled* to understand his own importance in the community, and forced to fight for himself *as well as for society*.

You should read *The Critic and Guide*. It is published at 12 Mt. Morris Park, West, New York City.

The man who always stops to think before speaking may not say very much, but he seldom has occasion to take any of it back.

"SCIENTIFIC MEDICINE VERSUS QUACKERY"

I hope that every reader of this journal will read Dr. Robinson's article on "Scientific Medicine versus Quackery," the first installment of which appears in this issue. In my opinion this is the most powerful defense of legitimate medicine and the most forcible arraignment of quackery ever presented. It should be placed in the hands of every possible layman, especially those who are inclined to belittle the work of our profession.

It seems to me that every doctor who reads this article will want to aid in distributing Dr. Robinson's great paper. To help along in this work we are planning to reprint it as a neat pamphlet. This will be furnished to members of the medical profession, in quantities, at cost price—\$2.00 per hundred. Let us know at once how many of these pamphlets you can use. Let us carry the battle with quackery into the enemy's camp. Will you not help?

Next month we hope to show you a fine picture of Dr. Robinson, who will contribute frequently to CLINICAL MEDICINE during the coming year.

PHARMACODYNAMICS OF ARSENIC

The medicinal employment of arsenic presents one of the most interesting phases of the history of therapeutics. Many times its poisonous properties have been made manifest by new developments. It is toxic in the largest as well as in the smallest doses; it is toxic whether taken for a short period or when habituation is attempted; when administered by the stomach, applied

to wounds, open sores or tumors, or when inhaled; it is toxic in every conceivable condition.

When tested by experimental therapeutics, administered to animals or to healthy human beings, no rational basis for the therapeutic application of arsenic has been found. In the arts and in domestic conditions it has approved itself as toxic in innumerable conditions. Nevertheless it has for centuries been one of the most popular of remedies, and new forms of the element are continually being devised and utilized.

To him who sees a cause behind every phenomenon, there is significance in this matter. We may not know the why, but there is a reason behind popular conditions and customs, as, for instance, in the universal use of the caffeine-bearing plants in all parts of the world as the basis of hot beverages. The love of tobacco is instinctive and almost universal; that of alcohol scarcely less so. These show that the article desired is not necessarily useful, but that it satisfies a desire felt by the majority of men. So we may assume that the use of arsenic as a remedy has some basis in truth even though we may be unable to explain just what it is.

The one fact shown clearly by experiment is that arsenic tends to induce fatty degeneration. It may be presumed that this power should be exerted more especially upon the *débris* of recent disease, as yet unorganized rather than upon the normal cellular elements of the body. This is one possible explanation for the preference shown for the arsenate over all the other salts of strychnine, in the treatment of acute febrile infections.

Then, again, it has been found that arsenic has an affinity for the red blood-corpuscles and imparts to these bodies the power of resisting the attacks of various microorganic assailants. This was first shown in the case of malaria, and it was then asked if the immunity conferred by arsenic did not obtain in the case of other inimical organisms. It was not long until this proved the case with trypanosomiasis, where atoxyl has been reported more effective than any other remedy.

Now we are told of the miracles worked by Ehrlich's "606," an arsenical product of

which a single injection is claimed completely to cure some cases of syphilis, primary, secondary or tertiary.

Hitherto we have had no better explanation of our preference for the arsenate of strychnine than that clinically it seemed to afford better results than the other salts. Now we ask, since arsenic protects or defends the erythrocytes in three infectious maladies, why not in others? And in how many others? The burden of proof will soon be on the side of the man who asserts that arsenic does not protect in any given disease, since this would prove, under the circumstances, an exception to an established rule.

Come we back to an assertion of Burg-graeve, that a tuberculous patient was cured because she was saturated with arsenates, after which several of its combinations were at once pushed to full toleration. Here we find another curious phenomenon, in that, of the long list of tonics listed by the active-principle therapeutists, that containing the arsenates of iron, quinine and strychnine, with a few drops of nuclein, has proved so popular that it is employed more than all the others together, either as used singly or in combination. We might be tempted to explain this by the tendency of physicians to employ a group of allied remedies instead of selecting the one most directly indicated, were it not for the law above exemplified, of the "survival of the fittest." There is more than chance in such unconscious selections.

THE GENERAL PRACTITIONER AS A SURGEON

Just how much surgery shall the general practitioner attempt to do? As to the answer to this question there is wide divergence of opinion. Some men think that the average doctor can train himself to do almost any kind of surgical work that arises in emergency practice and a large share of the routine operative work that now is passed over to the general surgeon. On the other hand, many others believe that operative surgery, requiring as it does special skill, training and a certain amount of particular adaptability, should be given over, as largely as possible,

to the men who practise surgery, and surgery exclusively.

I have read with much interest the discussion of this question by Dr. Berry in the September number of *The Oklahoma Medical News-Journal*. He says:

"Now, I do not arrogate to myself any great or extraordinary skill; but I do claim whatever skill I have has been acquired by special training along that line. I do know the general practitioner is not qualified to undertake such work unless he is specially trained for it; and no man is more willing to give the general practitioner credit for the work he is doing in his own way; and I do not agree with Dr. Waggoner, either, when he says he is becoming a mere pill peddler. The competent internal-medicine man today is the equal in skill and standing of any surgeon, and deserves equal honor and praise for the work he is doing, and all of them do not live in the cities either. I could name lots of conscientious physicians in the small towns, and even at the cross-roads, who are today doing scientific work that is not appreciated at its full worth by the communities in which they live, but I hope some day to see the people wake up to a realization of their duty to the country doctor—'God bless his soul;' but when Dr. Waggoner tells us he is competent to operate in 'ninety-five percent of all surgical work'—well, I just can't see it that way. The very character of the major portion of the general practitioner's work, its arduous and irregular nature, precludes such work. On the other hand, there is a large amount of minor work which any competent man should do."

In the same number of *The News-Journal*, Dr. Emory Lanphear takes a similar viewpoint. He says:

"Of even more importance, however, is the teaching of surgical diagnosis. Today thousands of bellies are being opened by inexperienced and incompetent 'county-seat surgeons' for purely imaginary conditions. The number of healthy ovaries removed because the women have Glenard's disease, neuralgia of the ileohypogastric nerve, sexual neurasthenia, or what not, is appalling; the number of theoretically diseased appendices extirpated is something astounding! And,

on the other hand, the high mortality from unrecognized appendical abscess (or appendicitis diagnosed too late), the large number of fatalities from gall-bladder and tubal infections, the infinite amount of suffering from chronic irritations which might be relieved by proper surgical treatment, all these are truly heart-rending to the man who sees."

The point that we should like to make is simply this: that no man should attempt to do work for which he is unqualified. Skill is needed. But if he has the requisite skill to perform an appendectomy or repair a perineum, or if he has the aptitude for work of this kind and through study, hospital training and otherwise can acquire such skill, there is no reason in the world why he should not learn to operate himself instead of sending his cases away to the nearest city, where the expense to the patient is much larger and the benefit not necessarily a whit more.

We must learn to walk before we can run, and we should *know* surgery before we take the lives of patients in our hands. Where the physician is not qualified it is well-nigh criminal for him to attempt to do surgical work; and, yet, it certainly is true that as he learns more and acquires a larger degree of skill, he can do a constantly increasing percentage of the operative work developing in his community.

And why shouldn't he? The conscientious physician every day of his life is seeking the knowledge which will make him more successful in the management of pneumonia, typhoid fever, scarlatina or tuberculosis. Isn't it just as much his right and duty to enlarge his surgical knowledge and perfect his technical operative skill? As he mounts the ladder, step by step (and that was the way Murphy got to the top), he is perhaps preparing himself to enter the class of the adepts or the masters—men like Ochsner and Ferguson; Lanphear and Robertson.

Now, mind you, I am not urging untrained, inexperienced or incompetent men to do work which they can not do well. And, like Dr. Lanphear, I am violently opposed to unnecessary operations, whether performed by "county-seat surgeons" or any other kind of surgeons.

We are simply urging our medical brethren to learn more, so that they can do more work, and better work—and reap the financial rewards. The more difficult cases, those involving unusual technical skill, will continue to flow toward the *exclusive* surgeons of unusual ability, like our friend Lanphear; and no class of men will send them to him more willingly than the men who have enlarged their surgical knowledge, and in so doing have both acquired strength and learned their own limitations.

What in me is dark
Illumine, what is low raise and support;
That to the height of this great argument
I may assert eternal Providence
And justify the ways of God to men.

—Milton.

SOME COMMENTS ON ACONITINE AND HIVE SYRUP

In a circular to physicians published by the National Association of Retail Druggists, occurs the following singular paragraph:

"As tincture of aconite is required by the Pharmacopeia to be of a definite alkaloidal strength, aconitine, 0.045 Gm., in 10 Cc. of tincture, it will be found practicable to use this tincture in preference to any other form of the drug. The alkaloid used alone is intensely irritant, it is the most active and most potent substance in the Pharmacopeia, and the disadvantage and danger of handling it in prescription amounts should operate against its employment."

Tincture of aconite, then, is measured by its strength in aconitine, the other elements being disregarded. The inference is, that aconitine is less irritant and less dangerous in the form of tincture than when separated and given by itself. The evaporation of the menstruum in the tincture and the decomposition of the aconitine are ignored, but each of these elements tends to uncertainty in the precise strength when the tincture is employed, no matter what it may have been when it left the manufacturer.

In common with many others, the writer has given many thousands of granules of aconitine alkaloid, and, singularly, has never noted the "intensely irritant" action which is spoken of.

As to the disadvantage and danger in handling aconitine in prescription amounts, we fully agree. There is too much variability in the several aconitines supplied to the market to permit of their use in this manner. Safety and efficacy demand the use of a single brand of aconitine. The same is true as to the tincture, but with aconitine we may secure an accuracy of dose never possible with the tincture, for the reason given above.

In the same pamphlet, recommendation is given to the compound syrup of squill. This U. S. P. preparation, when first introduced, was intended to supply the place of a popular nostrum, known as Coxe's hive syrup. I never could comprehend the popular liking for this preparation or its sanction by regular physicians. Both squill and senega are stimulant expectorants, increasing cough, and well calculated to arouse mucous sensibility in those sluggish cases where there is danger of the secretions collecting in the pulmonary tract until cyanosis, or even fatal obstruction of respiration, results. Tartar emetic nullifies the tonic effect of the other two, while it increases secretion, hence is directly antagonistic to the other ingredients. The net effect will depend upon the stronger element of the combination, minus the weaker. It is an apt example of the ancient form of prescribing, where several members of a group of remedies, in this case denominated "expectorants," are thrown together and administered without any definite idea as to the exact effect to be expected from each. The combination is an excellent illustration of drugstore prescribing, in many cases routine in character, and hence tending to irrationality.

One other point in this circular deserves mention: Mr. Potts says that the U. S. P. and N. F. propaganda is gradually doing away with counter-prescribing by the pharmacist. Just why it is having this effect he fails to say, and the *rationale* is by no means clear to us. That such a remark could be thrown out as a sop to the physician, we can readily understand, but beyond this the conclusion is incomprehensible. However, we hope that this is true, for counter-prescribing is certainly one of the most important bars to the closer

relationship between the two professions, so much to be desired.

Conduct, culture and character are graces that go through life hand in hand, never separate or alone. Happy is he who has more than a speaking acquaintance with each.

THE EFFECT OF RESTRICTED DIET UPON VITAL RESISTANCE

While "of making of books there is no end"—and this applies especially to medical publications—yet it is here emphatically true that "there is no new thing under the sun." The tomes that burden the desk of the reviewer are mainly compilations, and compilations of compilations, without end evermore. Surely, this is not because we have circumnavigated the globe of Truth, and left no unexplored regions for the present-day adventurer. We can take no step in medical science without finding ourselves in a region of fog and darkness. We can not inquire as to the primary essentials of our art without finding them unknown. Can any physician who reads these lines, choose the dozen drugs he most utilizes and tell offhand how long it takes each to begin its activity as denoted by recognizable effects; how long the action takes to reach its maximum; how long the action endures there; how long it takes to subside; how it is eliminated? And, yet, these facts are to the art of therapeutics what the multiplication table is to mathematics.

In the ages since Æsculapius founded the art of medicine we should have ascertained also such primary facts as the influence of diet on the vital resistance, but practically nothing has been done along that line. Reid Hunt enumerates our acquisitions on the resistance against poisons as follows: Delafoy found starving frogs much more sensitive to strychnine than normal frogs; Lewin found starving animals more resistant to quinine, atropine and nicotine than well-nourished ones; Roger came to the same conclusion when quinine and atropine were injected into a peripheral vein, but the reverse when injected into the portal vein; Jordan proved digitalin more toxic to starving dogs; and Adducco reported cocaine, strychnine and phenol much more poisonous to starving than to well-nourished dogs.

Reid Hunt took up the investigation, and his results are published in Bulletin No. 69 of the Hygienic Laboratory of the Public Health and Marine Hospital Service of the United States. He chose acetonitrile as the toxic agent, and made experiments on mice and coneys (guinea pigs). His conclusions are these:

1. Restricted diet markedly increases the resistance of these animals to acetonitrile.

2. Coneys on limited diet excrete a less amount of the cyanogen as sulphocyanate than those on full diet.

3. Diet increases the resistance of some animals to certain poisons, even forty-fold sometimes.

4. Certain diets, notably those of dextrose, oatmeal, liver and kidney, greatly increase the resistance of mice to acetonitrile, in this resembling thyroid gland.

5. This action of oatmeal may partly be due to its effect of modifying the thyroid secretion.

6. In some cases diet markedly affects the reactions of animals to iodine compounds, probably through the thyroid gland. The state of this gland is more important than the form of iodine used.

7. Some diets, notably of eggs, milk, cheese, fats, greatly lower resistance, antagonizing the action of thyroid secretion.

8. Some glands, principally the prostate, the ovaries and testes, affect resistance, as does also the thyroid, but much less. The thyroid, the parathyroid and suprarenal glands exert no action or one contrary to that of the thyroid gland.

9. Resistance of animals to propionitrile is markedly influenced by the diet.

10. Diet affects distinctly, although not markedly, resistance to morphine.

11. Season influences this resistance, probably by altering the thyroid activity.

12. These experiments show that the foods entering largely into the diet of man have most pronounced effects on the resistance of animals to certain poisons, producing changes in metabolism that are not readily detectable by methods ordinarily used in metabolic studies. The ease and rapidity with which certain changes in function are caused by diet are in striking contrast with

the essentially negative results obtained by the chemical analyses of animals fed upon different diets.

From mice taking acetonitrile to children swallowing stramonium seeds or salmon ptomaines is a far cry. Yet these experiments have significance, and especially those showing the effects of liver in increasing the vital resistance. One series of observations (on page 28 of the Bulletin named) showed that the effects of various foods in increasing weight were exactly contrary to their action in adding to the vital resistance. Thus, we note that boiled egg-yolk, boiled milk, cheese, raw milk, lean ham, boiled egg-white and bread, boiled egg-white and oatmeal, bread, oats, boiled potatoes, boiled liver increased weight in proportions decreasing down the list from 40 percent to 10 percent, while the resistance was raised from a fatal dose of 0.15 Gram with egg-yolk to one of 3.5 Gram with liver.

I ask little from most men; I try to render them much, and to expect nothing in return, and I get very well out of the bargain.—Fenelon.

CERTAINTY OF "DEFINITE" THERAPY

Speaking of acute laryngeal dyspnea in children, Dr. Barwell says, in *The Lancet*, "When the spasms are severe, amyl nitrite may be tried, or nitroglycerin, 1-500 grain every three hours; and sometimes belladonna is of value."

Note the hesitating uncertainty so characteristic of the man who as a rule employs galenicals uncertain in themselves, and with timidity born of the fact that he does not really know just what his drugs are going to do. Let us say here that if he administers glonoin, gr. 1-100 every five minutes till effect, it will *surely* relax the spasm; and if he adds atropine in like dose every hour, it will surely confirm and prolong this effect, and give relief. These remedies act thus because they can not help doing so. There's no "maybe" or "guess" about it.

This hesitation and uncertainty are so characteristic of the ordinary prescriber of old-fashioned drugs that it deserves further consideration.

Dr. Barwell recognized the presence of dyspnea, which he correctly attributed to

spasm. He also correctly placed the point for therapeutic attack, which is further than many of his colleagues would go. But how ineffective his therapeutics! He administers a minimal dose of a remedy which if pushed to full dosage would be as absolutely sure to relax that spasm as that two and two make four. Yet he only "tries" it! The reason is obvious: he gives a drug, the activity of which in the doses named is exhausted in five minutes, one dose once every three hours! Evidently his knowledge of glonoin, i. e. nitroglycerin, is limited to the fact that he has heard of its being recommended as a remedy for dyspnea.

Tnen, again, "Sometimes belladonna is of value." Surely, it is! Provided it contains enough atropine in the doses given, the belladonna preparation will hold off that respiratory spasm as long as the effect of the atropine contained endures. But while belladonna *may sometimes* be of value, atropine is *always* of effectual value if given in doses sufficient for the need.

This affords an apt illustration of the radical difference between the active-principle therapeutics and the galenics.

Unfortunately, the disciple of Galen thinks or assumes without thinking that he knows it all. When he hears us speak of glonoin and atropine for respiratory spasm, he at once recalls his recollection of amyl nitrite and belladonna, concludes swiftly that that is all there is in it—an old story—and at once dismisses the matter from his mind.

To him the positive, clear-cut statements of the users of positive, definite medicaments sound like arrant nonsense. He has used belladonna—and atropine is belladonna; so, why should those men make such extravagant claims for atropine, when, as he fancies, he knows all about it—that is, about belladonna?

"Does the alkaloid, atropine, add anything to belladonna? On the contrary, it is less than belladonna, for the latter contains something more. And how can a part be more than the whole? Pshaw!"

Thus thinketh ye conservative.

The trouble with our unadvanced friend is, that the simple matter of giving exactly

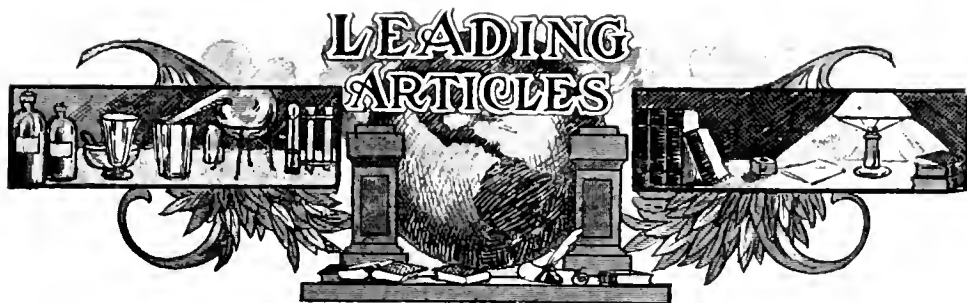
enough of a remedy to correct exactly the disorder of function present is outside his sphere of thought and action.

Active-principle medication, definite therapeutics, is not in any sense a mere treatment of symptoms. The same symptom, even the same grouping of symptoms, may result from several totally distinct etiologic and pathologic conditions demanding different treatment. Surface resemblances may exist, to be sure, but with complete organic dissimilarity; or the contrary may be true. There may be any one of a number of pathologic conditions underlying a pain in one location in the abdomen—and there is not a spot between diaphragm and pubis, from one kidney to the other, in which the pains radiating from gallstones may not at some time be located.

The man who judges diseases solely by the symptoms reminds us of the philologist who, noting the similarity in pronunciation between the Hebrew verb "*kophar*" and the English "cover," jumped at once to the conclusion that the two languages were identical. Cover, however, is a modern product. Tracing it back through Old English and French, we find it in the form of *couvrir*, *coprire*, till we reach the Latin *cooperari*, *con* and *operari* (root, *opus*), where the resemblance to the Hebrew root *Kphr* is not at all so striking or convincing.

It is the etiologic and pathologic condition against which a rational therapeutics should be directed, and not the mere aggregation of symptoms. That the indication is sometimes the same is merely incidental, but by no means essential. To those who have become personally familiar with direct, definite, certain medication, the positiveness of its advocates is a matter of course; but only a personal familiarity with these means and methods enables one to comprehend it.

The awakening of many to the true meaning of this matter will come only when it gets in the hands of the public. Then there will come a demand, loud and distinct, that no sensible practitioner can ignore—the demand that the doctor shall know *what he is giving, why he is giving it, what it will do, and when he has given enough*.



Scientific Medicine Versus Quackery*

Should Ignorant Laymen be Permitted to Treat the Sick

By **WILLIAM J. ROBINSON, M. D., New York City**
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 and *Guide*, *The American Journal of Urology*, and *The Medical Review of Reviews*

EDITORIAL NOTE.—This address, which was delivered before *The Brooklyn Philosophical Association*, December 18, 1910, is the most forcible presentation we have ever seen of true, scientific medicine, as compared with quackery in all its forms. Not only should every physician read it carefully; he should also put it into the hands of other physicians, and be prepared to bring its irrefutable logic to the attention of the people of his own community.

THE immortal poet and lover of liberty, Friedrich Von Schiller, said: "Against stupidity the gods themselves struggle in vain." I am reminded of this saying every day, every hour of the day. The fact that now, at the close of the tenth year of the Twentieth Century, I have to stand before you and debate a question which to my mind is so clear and simple that any sane child should be able to answer it correctly is positive proof of the truth of Schiller's statement.

But, nevertheless, even though I am not a god, I shall try to combat some of the errors with which your minds are filled, and to dispel some false ideas which are deliberately fostered and nurtured by the various quacks and ignoramuses whose special province is to prey upon the sick and gullible. Perhaps a mere human, speaking the lan-

guage of common sense, will succeed in accomplishing that which the gods fail to achieve.

As this is the first time that I speak before this Association, a few introductory remarks may not be out of place. Let me inform you, my friends, that I never beat about the bush, never hide behind generalities, never speak to the gallery, never curry favor with my audience, never court applause, never waste time on platitudes; and that I never speak, if I can help it, to an assembly which I know, beforehand, agrees with me in all or in most of the points under discussion. What is the use? Time is too valuable—at least mine is—to waste it in the restatement of propositions with which everybody agrees, in solemnly insisting upon truisms which nobody has ever thought of disputing.

What Is the Point Under Discussion?

Let us make clear from the very outset what the point under discussion is.

Squarely put, the question is this: Should everybody who wishes to practise medicine and call himself a doctor be permitted to do

*This splendid address should receive the widest possible publicity among laymen. To facilitate this, the publishers of *CLINICAL MEDICINE* will reprint the article (when it is completed) in neat pamphlet form. These pamphlets will be sold at \$2.00 per 100. Every doctor who wishes to fight quackery should secure a supply and distribute them widely. Send in your orders today. See, also, the editorial on page 151, this issue.

so, or should the State put up certain rigid safeguards and permit only those to practise medicine who have shown themselves competent to do so?

One should think that, outside of a lunatic asylum, this question admits of no discussion. But, unfortunately, this is not so. Many men and women, sane in all other respects, seriously maintain that the practice of medicine should be free to all; that free competition will eliminate the unfit, and that all laws for the regulation of the practice of medicine are in the nature of a trust or monopoly and are demanded by physicians in order to protect themselves against the equal or even superior skill and knowledge of their irregular competitors. And these views are entertained, not only by ordinary men and women, but even by people who call themselves radicals, and who in matters of religion, politics and economics may be trusted to reason sanely and logically.

And here I will say, in parentheses, that it is this latter fact—the fact that so many radicals entertain idiotic ideas regarding the regular medical profession and the practice of medicine—that induced me to agree to speak before your body. And many radicals even see a contradiction in my attitude toward the irregular so-called doctors or quacks. They are surprised that Dr. Robinson, who is known as an uncompromising libertarian in all spheres of human activity, should be so bitter toward nonlicensed, self-styled doctors, and should so strenuously demand their prosecution and elimination. My friends, there is no contradiction in my attitude; I have always differentiated between liberty and license; and human health—human life—has always been too dear to me to permit it with equanimity to be ruined by ignorant and unprincipled quacks.

As to the accusation that the scientific physicians are opposed to the irregular practitioners out of selfish reasons, because they fear the competition and the inroads on their practice, all I can say is, that the accusation is as stupid as it is false. For it is those physicians who have passed their struggling period, who are financially independent, that are most active in making the safeguards about the practice of medicine stronger and

more efficient. Personally, I should not care a rap if tomorrow every bootblack began to practise medicine and every street-cleaner proclaimed himself a surgeon. It would not hurt me, financially, in the least. But it would make my heart bleed for suffering and ailing humanity.

Public Incompetent to Decide as to Qualification of Physicians

But, questions the dear public—that is, a portion of it: “Are we too stupid, too ignorant to decide whom we want for our medical adviser? Are we incompetent to determine as to who is and who is not a good physician?” Yes, my dear public, you *are* too stupid, you *are* too ignorant in medical matters, and your opinion as to who is and who is not a good physician *is* utterly worthless. Disease and recovery from disease are entirely too complex processes to be satisfactorily judged by the average untutored intelligence, and the value of a physician cannot be decided by his glib talk, by his prepossessing appearance, by his well-fitting clothes, by his sixty-horsepower automobile, by his rich office furniture, or even by the few cases where he has cured or is supposed to have cured.

Let me give you two or three common, ordinary, everyday examples. A man gets a severe diffuse pain in the abdomen. He calls in Dr. A. The diagnosis is not yet certain; it may be appendicitis, peritonitis, inflammation of the bowels, or something of the kind. Dr. A. therefore orders the patient to stay in bed, remain perfectly quiet, partake only of liquid food, perhaps orders an ice-bag, and says he will call tomorrow, when the symptoms will be more distinct and the picture more definite. He says it is better the patient should suffer some pain than to obscure the picture of the disease by narcotics. He leaves. The patient is not satisfied, however. He is impatient of pain. He calls in Dr. B. Without an attempt at a proper diagnosis, this medic jabs in a hypodermic of morphine or prescribes opium in some form. The patient feels better at once; the pain has left him; he sleeps through the entire night.

Meantime the disease has been making further inroads, but the symptoms are indis-

tinct, because they are masked by the opium or morphine. The patient may die—and the death may even be due wholly or in part to the second doctor's treatment—and, yet, for all this, the relatives and friends may consider Dr. B. a better physician than Dr. A., for did not the former make the patient feel better at once, while the latter could not even relieve him of the pain?

Another example: Dr. A. treats a pneumonia patient, and he dies; Dr. B. treats a pneumonia patient, and he recovers. To the public this at once proves that Dr. B. is a better physician than Dr. A. Nevertheless, Dr. A. may be a very skilful, scientific physician, while Dr. B. is an ignorant quack. But Dr. A.'s patient was a man given to alcoholic excesses, with a weak, leaky heart and hard calcified arteries; he did not stand one chance in ten thousand to recover; while, on the other hand, Dr. B.'s patient was a strong, clean fellow, with a powerful heart and elastic arteries; the chances being that he would have recovered even without any treatment. We physicians know that, but the public does not. To the layman, pneumonia is pneumonia, as to some people pigs is pigs; he does not know that one case of pneumonia may be to another case as 100 is to 1. He does not know that the name of the disease counts for little—that the patient is everything.

To take one more example from pneumonia. Some of you possibly know that pneumonia, when fully established, is what we call a self-limited disease; that is, it runs its course, and cannot be cut short or interrupted by any drugs or methods of treatment. We can only make the patient comfortable and do everything in our power to avoid complications. On the seventh or ninth day there is a crisis, when the disease breaks, and the patient feels at once like a new man. Every physician will tell you that he has had this experience: he has been called in to a case of pneumonia on the first or second day; he is doing the best that could be done for the patient; but the patient is not getting better, as he could not be expected to.

But the relatives get alarmed; and on the fifth or sixth day they call in another doctor; on the seventh day the crisis occurs—and

this second doctor is considered a very god. If he is an honorable man, he refuses to take credit that is not due him, tells the people that the first physician was treating the disease correctly, and that the sudden improvement is due to the crisis. If, however, he is not, he silently accepts all the adulation bestowed, and the people are sure that Dr. Number One is a bungler and Dr. Number Two a medical wizard—when, indeed, just the reverse may be the case. And so I could go on citing examples without end.

Public Not Competent to Judge of the Value or Worthlessness of Medicines

Let me give you just one more illustration, one of a different character. A young man became, unfortunately, addicted to the use of morphine. He earnestly wanted to break himself of the pernicious habit. He applied to several physicians in succession. These men prescribed for him, but as the morphine-habit cannot be treated very successfully outside of special homes or institutions, the results were not very satisfactory.

By and by this young man came across an advertisement of an "infallible cure" for the morphine-habit. He wrote for it. He took of it. He was relieved at once from the craving for morphine by the very first dose. He continued to take the medicine four times a day, and found that he could get along without any morphine at all. He was happy. He met me: "Oh, you doctors know nothing. And the patent medicines against which you rail so much are sometimes better than your doctors' prescriptions. Since using this habitina I have not taken a single dose of morphine."

The cure seemed to be too marvelous to be true, and I asked the man to bring me the medicine. I analyzed it. I suppose you guess the result. It was full of morphine and heroin, and the doses he was taking contained twice the amount of morphine that he had been accustomed to before. So, instead of being freed from the morphine-habit, as he thought he was, this man was being grasped in its clutches more and more strongly, more and more irretrievably, more and more hopelessly.

It seems almost impossible to believe that people could be so depraved as to offer a

disguised *morphine* mixture as a cure for the *morphine*-habit. I confess that I could not believe it at first. I could not believe that human depravity could reach such low depths. But I was forced to believe, because I read the circulars and labels with my own eyes and analyzed the mixtures with my own hands. And many of the patent medicines on which the public was spending millions, I found, were nothing but the most miserable concoctions of cheap whisky, stimulants and narcotics—and the public blissfully swallowed them, and some trustfully swore by them.

Public Not Even Competent to Judge of Its Food

But not only as to physicians and drugs is the public an incompetent, untrustworthy judge, it cannot be relied upon even to judge of its foods. You know what rascalities were perpetrated upon the public prior to the passage of the Pure Food and Drug Law. Literally rotten meat, decayed eggs, rank lard and butter were, by the aid of deodorants and disinfectants, made to pass for fresh, wholesome articles; colored filth for catsup; garlic, dirt and refuse for bologna sausage— but what's the use enumerating further? I do not wish to make you feel sick at your stomachs. And, still, the people swallowed it all, without so much as a murmur. Every once in a while we would hear of a case of ptomaine poisoning—but that was passed as a mere matter of course.

Some People Utterly Without Conscience

I am a confirmed optimist, and I would not exchange my optimism for the dearest of my material possessions. I believe in the essential goodness of human nature; and I believe that under improved social conditions everything that is good in us will blossom forth as a beautiful flower, while everything that is bad will shrivel and dry up for lack of nourishment and fall away.

And even now, under our present miserable conditions, the average man, while not particularly intelligent, is on the whole honest and decent. But—but—but—there are certain people (let us hope that they constitute but a minute fraction of the whole of

mankind) who are absolutely devoid of any trace of conscience, who are cruel and brutal, to whom human health and human life mean absolutely nothing, and who for the sake of profit would poison the food supply and jeopard the health and lives of a whole community, nay, of all mankind.

It is against such conscienceless brutes that we need a strong paternal government, that we need rigid rules and regulations. And let us remember that the substitutor of drugs, the adulterator of foods, the diluter of milk, the seller of decayed meat, the purveyor of ignorant advice in medicine, i. e., the medical quack, all belong in the same category. They all cheat, deceive, and prey upon, the public.

Things are not perfect now; still, the public has some measure of protection. Abolish the laws regulating the practice of medicine, abolish the Pure Food and Drug Law, abolish meat inspection, abolish the law requiring drugs to conform to the pharmacopeial standard, and what would be the result? In less than three months the country would literally be overrun by ignorant, blatant, murderous quacks who had never been inside of a medical college; our butcher shops would be filled with diseased, tuberculous meat; our drugstores would contain worthless, inefficient drugs and injurious substitutes.

No, at the present stage of our civilization we need—I repeat—paternal government; we need strong, rigid laws regarding the practice of medicine and the manufacture of drugs (as well as foods); and the laws ought to be rigidly enforced, if we wish to do our duty to the confiding, unsophisticated, and by itself utterly helpless public.

Practice of Medicine Not the Same as Selling Shoes

Only recently I heard this most brilliant argument: "If we are to be told whom we should employ as physicians, why should we not be told where we must buy our shoes and our clothes?"

This line of reasoning is really too silly to deserve an answer. But as one apparently sane person was found who asked it, there may be others, and I will answer it. The difference is this:

If you buy a pair of shoes, and they go to pieces in two weeks, you stop dealing with the shoe store where you purchased them, and your only loss is three or four dollars. The same when a dealer sells you a garment which he guarantees to be pure wool but which proves to be pure shoddy. (And even in this respect the government is about to step in and see to it that commercial lying shall cease. As you can no longer label canned pork, chicken, colored glucose, honey, Newfoundland herrings, French sardines, powdered gypsum, cream of tartar, so there is hope that it will soon be criminal to label a mixture of cotton and shoddy as wool, and colored paper as leather.)

On the other hand, when you have an only child sick with diphtheria and you call in a man whom you think is a competent physician, but who in reality is an ignorant quack, and on account of his maltreatment the child dies, then it is a very poor consolation to you to say that you will not call him the next time. And when you have a wife who is the very life of your life, the very soul of your soul, and during childbirth you call in an utterly ignorant woman who calls herself a midwife, and your wife dies from postpartum hemorrhage or septic infection, then it is no consolation to be told that next time you will know better.

Why Should the Practice of Medicine Be an Exception?

But why this clamor for so-called freedom in the practice of medicine? Why should medicine be the sole exception? When you go across the Atlantic, you want to be pretty sure that the captain and the pilot of the vessel have had a thorough training, have passed several rigid examinations, and are thoroughly competent to do their work. Why not demand freedom in sailing craft? Let every person who claims he can guide a vessel across the great ocean be permitted to do so. If he steers the vessel out of the proper course, or if he wrecks it by striking rocks or shoals, why, we shall not employ him next time!

You see the absurdity of the thing. The proposition to admit every ignoramus to meddle with the human body is not a whit

more absurd. The human body is a more complex organism than the biggest twin-screw ocean grayhound and it more often requires more brains and more ingenuity to steer a diseased body back to health than it does to steer a steamer from one continent to the other. Why, even in plumbing we now demand experienced men who by examination have shown their competency to do their work, for we do not want leaky pipes, and object to sewer gas polluting our rooms.

And what a hue and cry there would be raised throughout the country if it were discovered that ignorant, incompetent and unlicensed men were permitted to make up prescriptions in drugstores and to handle poisons and dangerous substances. The public would justly be horrified. Should the people not feel still more horrified at the thought of ignorant men attempting to cure diseases of which they know nothing?

Protection Not for the Medical Profession But for the Public

No, it is not for the protection of the medical profession against competition that we demand medical-practice laws: we want them solely for the protection of the lives and the health of the people from ignorant, dishonest and incompetent pretenders!

"But," it will be said (for this has been drilled into the ears of the public by the quacks), "you are trying to establish a monopoly; you are trying to make everybody treat disease according to your ideas, according to the rules of the 'regular' school of medicine. How can we be sure that your school is the best one?"

How false the statement is that we wish to force upon the people *one method of treatment* will be seen at once when I tell you that in New York, for instance, and in several other states, at the examinations of the state board of medical examiners no questions whatever are asked regarding treatment of disease. We assume that every physician, after he is licensed to practise medicine, will, either out of altruistic or out of selfish motives, do his best to cure his patients. And as no unanimity, no finality has been reached in regard to the treatment of many diseases, we prefer to

leave that part of it to the judgment and the conscience of the individual physician. *But we want at least to be sure that the man is capable of diagnosing diseases*, and that, if he wants to apply the right treatment, he is able to do so.

Let me illustrate by an example or two. We will assume that even a quack who has dabbled a little in medicine knows how to treat eczema and syphilis. But how can such a one treat either disease if he is not able to distinguish one from the other? And just to think of the damage the patient would suffer if that quack treated an eczema for syphilis, or the reverse, as frequently is the case.

It is not difficult to find out what to do in a case of chancroid and what to do in a case of chancre; but it takes years of study, it requires practice with hundreds of cases under competent teachers to be able positively to distinguish the one affection from the other.

Do you see? It is not the treatment that is always the most difficult part. Very often it is far more difficult to diagnose correctly than to treat correctly. *There may be a short road to treatment, but there certainly is no short road to the diagnosis of disease.* It requires years of study, years of practice, the aid of the thermometer, stethoscope, sphygmomanometer, cystoscope, microscope, a knowledge of uranalysis, of blood examination, germ culture, and so forth, before we can arrive at a correct diagnosis. Then, how can a quack expect to name the disease? If this fellow did know all those things, he would not be a quack but a regular scientific physician.

If anyone tells you that we try to interfere with anyone's method of treating disease, tell him plainly and simply, on my authority, that he is a liar. All we want is, that any man who wants to undertake to treat human disease should show that he has spent several years in the study of the human body; that he knows its anatomy, physiology and chemistry; that he knows the causes and symptoms of the human ailments, and that he is capable of differentiating one from the other.

Is that demanding too much? I think not. At any rate, for the sake of humanity, *we can demand no less.*

THE OBJECTIONS TO SCIENTIFIC MEDICINE

Having proved—to your satisfaction, I hope—the necessity of safeguarding the practice of medicine, of limiting it to people only who have spent some years in acquiring some knowledge of the subject, we will proceed to a discussion of the objections to scientific medicine, and will endeavor to present the difference between regular medicine and irregular medicine, or quackery.

We will take up every subject seriatim.

Are Drugs of No Value?

One of the commonest arguments against medicine is that drugs do not cure, are of no use, only act as poisons. To this we can only reply: Ignorance! Ignorance!

Only ignoramuses who are not familiar with the action of drugs, who are not familiar with their proper doses, their indications and contraindications, who have not used them scientifically, can make such an assertion. And the so-called drugless healers are not men who have taken a thorough course in scientific medicine and in pharmacology, or who have treated patients with drugs for a number of years, giving them a conscientious trial, and then decided that drugs were useless. No, they are men too ignorant or lazy to have taken a course in scientific medicine, and afraid of handling drugs, because being ignorant of their doses and proper use they would prove too dangerous weapons in their hands. For such men it is safer not to use any drugs at all, and in order to justify themselves before the public, they needs must attack those agents and speak eulogistically of their own drugless methods of healing. Are such men, who have never given drugs a proper trial, entitled to any opinion as to the value or worthlessness of drugs?

But here someone is sure to interpose with an objection. Somebody is sure to bring forward the hackneyed and threadbare quotation from Oliver Wendell Holmes, who is said to have stated that "if the whole materia medica could be sunk to the bottom of the sea, it would be all the better for mankind and all the worse for the fishes." And Dr. Holmes was surely not a quack. He

was one of the most clear-sighted of our physicians.

But the trouble with that quotation is of a two-fold character. First, it is—like all the quotations of the antivivisectionists, anti-vaccinationists, and antiscentists in general are apt to be—garbled. The original quotation of Dr. Holmes is as follows: "*Throw out opium*, which the Creator himself seems to prescribe, for we often see the scarlet poppy, growing in the cornfields, as if it were foreseen wherever there is hunger to be fed there must also be pain to be soothed; *throw out a few specifics*, which our art did not discover and is hardly needed to apply; *throw out wine*, which is food and the vapors which produce the miracle of anesthesia, and I firmly believe that if the whole materia medica AS NOW USED could be sunk at the bottom of the sea, it would be all the better for mankind—and all the worse for the fishes."

This, as you see, makes quite a difference. Dr. Holmes did except opium, the various specifics, by which we understand mercury, quinine and sulphur; he did except wine and the anesthetics; and he said distinctly, "*as now used.*" And as it is more than half a century since he made his ill-fated remark we can fully understand it. For half a century ago drugs were used in a crude and unscientific manner. Things have changed greatly since those days. Holmes would have to make a few more exceptions: for instance, he would have to except diphtheria antitoxin, the thyroid gland, the active principle of the suprarenal gland, and "606."

We Are Not Drug Worshipers

We are no longer the worshipers of drugs that our ancestors were; we no longer look upon drugs as mysterious deities, nor do we believe that every disease has its specific remedy; we use fewer drugs; we use smaller doses; we use simpler combinations; we discourage shotgun prescriptions. But all this means simply a better, a more intelligent use of drugs, and not a denial of the value of the use of all drugs.

He who has seen the lesions of syphilis melt away under the administration of mercury, iodine or "606;" he who has seen the chills and fever of malaria disappear as if

by magic under a properly administered dose of quinine or arsenic; he who has seen a miserably dwarfed, imbecile little cretin grow in stature and gain intelligence from day to day under the use of thyroid; he who has seen the pale cheeks of the chlorotic or anemic girl change into red roses under the administration of iron and arsenic; he who has seen a waterlogged old man or woman unable to make a step without getting out of breath take on a new lease of life under digitalis; he who has seen a nasty diphtheritic membrane roll away as if by the touch of a magic wand after a dose of antitoxin; he who has seen the fearful torturing pain in a case of renal or gallstone colic cease instantly after an injection of morphine; he who has seen the life-saving effect of a few drops of amyl nitrite in a case of angina pectoris; he, I say, who has seen all those things will not agree to practise medicine without any drugs. And he who has not seen these things is not a physician, and has no right to hold any opinion on the subject. If in spite of having no right to express an opinion on the subject, if he persists in railing at drugs and claims to be able to treat all diseases without drugs, he is simply a knave and an enemy of mankind.

Surgical Operations

We are blackguarded because we perform surgical operations. We are called monsters, butchers, belly-rippers, and what not, and many of the quacks of the "no-drug-no-knife" kind try to convey the impression that all surgical operations are unnecessary, useless and even injurious. I am bound to admit that my profession has been guilty of such a thing as excessive surgery; I admit that even now there are cases of operations being performed on patients who could get along without them. But I wish to state it as emphatically as I can that there are thousands and thousands of instances in which a surgical operation constitutes the only method of treatment or offers the only chance of saving the patient's life. And those quacks who, through maliciousness or ignorance of our wonderful surgical achievements, throw ridicule on surgery and odium upon the surgeons, and thus prevent their dupes from seeking surgical help, drive

many victims to an untimely grave, and thus deserve the execration of all men.

Drug Dopers

"Drug dopers" this is a favorite expression of the quacks. An attempt is made to cause the people to believe that our only way of treating disease is by the means of drugs; that we neglect all other methods except stuffing the patient with pills and powders and mucous concoctions. No more impudent stupid lie was ever uttered.

Drug-treatment constitutes only a small—a very small—part of the modern practice of medicine. There is not an agent or method, material or immaterial, that we, members of the regular medical profession, do not employ in the treatment of disease. Regulated diet, graduated exercise, water internally, and externally in the numerous hydrotherapeutic methods, mineral waters, baths, direct sunlight, fresh air, heat in its multitudinous forms, massage, drugs of mineral, vegetable, animal and synthetic origin, surgical operations, electricity, roentgenotherapy, Finsen light, radium, antitoxin sera, bacterins, vaccines, suggestion (psychotherapy), hypnotism, all of these agencies we regular scientific physicians make use of freely in our endeavor to cure and to prevent disease. We may use only one of these agencies in the treatment of many of the diseases, but we do not hesitate to use all of them whenever they seem indicated.

And here comes sectarian Number One and tells us that he can cure all diseases by manipulating the vertebrae. Sectarian Number Two claims that he can cure all diseases by water alone. Quack Number Three claims that he will prevent and cure all your ills by arranging your diet for you, making you eat lots of salads, or cutting off all meat, or some other dietary hocus-pocus. Quack Number Four claims that uncooked food is the panacea. Fraud Number Five vociferously asserts that he can cure all diseases by making you believe that it is all an error in your mind.

All such claims and assertions are absurd and fraudulent, because there is no single agency in the world that is applicable to the entire range of human disease. It makes no difference what the agency may be, if

anybody tells you he can cure *all* diseases by the aid of one particular agency, you can safely put him down as a quack. And there are hundreds and hundreds of books, good scientific books, books that can be relied upon, and dozens of journals written and edited by members of the regular medical profession, which are devoted exclusively to nonmedicinal methods of treatment.

Do you see now how false the accusation is that we are merely drug dopers?

We Are Accused of Having Many "Schools"

One of the favorite arguments—an argument which appears to possess much weight with the uninformed and unsophisticated—is the contention that medicine is not a science at all; that it is nothing more than a jumbled collection of a few empirical facts and observations; that it consists of several "schools," each diametrically opposed to all the rest; that a practitioner of one school treats his patients on lines entirely different from those accepted by the practitioners of the other schools. This being a fact, say these false leaders, there is only one conclusion to be reached: either all schools of medicine are wrong or, at least, only *one* is right and all the rest are wrong. As each school believes that it is the only right one and that the others are in ignorance and error, there is no possible means for the layman to determine which is really the right one. The only just way out of the dilemma, therefore, is to abolish the control of the practice of medicine altogether and permit everybody to practise, leaving it entirely to the people to choose their medical advisers.

With a show of plausibility, these sophists say: "Why are there no different schools of physics, schools of chemistry, schools of botany? Answer: Because these are *sciences*. Medicine, on the other hand, is no science at all, but only a conglomeration of mistakes and superstitions."

Says one of the periodicals devoted to quackery of the worst form: ". . . They are the advocates of the various schools of medicine. They do not agree among themselves on a single question of importance to the patient. They exhaust the vocabulary of vituperative words in describing each other's practice. The homeopath calls the

allopath a murderer, while the allopath calls the homeopath a flimflammer. The eclectic is as sure that the allopath is wrong, as he is sure that he himself is right. The dear people are warned by the allopath against the homeopath. The unsuspecting public is warned by the homeopath against the allopath. The unsophisticated masses are warned by the eclectics against all other schools of medicine," etc., etc., *ad nauseam*.

But let us look a little more closely into the matter. Are there really such wide and fundamental differences among the schools? Let us take, for example, a case of placenta prævia, hemorrhage from the uterus, or one of transverse presentation. Is such a case treated differently by the regular physician, the homeopath, the eclectic? Not at all. All competent practitioners of either of these schools will treat it exactly alike. Take a case of Potts's or Colles' fracture, or one of dislocation of the shoulder. Will it be treated differently by followers of the different schools? No, their treatment will be exactly alike. Will a stone in the bladder, an intussusception of the bowels, an incarcerated hernia, an acute or chronic otitis media, a severe nasal hemorrhage, a foreign body in the larynx, a trachoma, an iritis, a glaucoma, a severe shock, a case of poisoning, and so on, be treated differently by the representatives of the various schools? Most emphatically, no! All such cases are treated practically alike by the educated and competent physicians of all schools.

The real difference among the schools becomes only manifest in the internal treatment of *some* internal diseases. But even here there is a universal agreement as to the general management of the case, as to hygiene, nursing, diet, etc. The difference is only in the drugs used and in the doses, and even in this respect the barriers are beginning to be thrown down, and what at one time seemed to be an impassable gulf is beginning to be bridged over.

Homeopaths now largely recognize that the reaction against excessive and careless dosage during the last quarter of the Eighteenth and the first quarter of the Nineteenth Century has swung to the other extreme, and the majority of them have at the present no

scruples in using drugs in the same doses as they are used by the regular physicians. The eclectics, to whom at one time mercury was the incarnation of everything wicked and diabolic, are now using the salts of that metal without any compunction. They have perceived that it was the careless and excessive administration of that drug that occasionally worked havoc with the patient's constitution, and that if administered with proper precautions (a thing necessary in the administration of any drug) it is one of our most powerful therapeutic weapons. And I know both homeopaths and eclectics who are clamoring most vociferously for Ehrlich's "606."

The newest remedies, the latest products of the synthetic laboratory are used with almost equal frequency by the followers of all the three schools. Druggists with a large prescription trade, who are patronized by regular physicians, homeopaths and eclectics testify to the fact that, while in minor ailments and in mild diseases the treatment by physicians of diverse schools may vary widely, yet in severe diseases and in emergency cases the prescriptions are practically the same—the drugs and the dosage—no matter from what school of medicine they emanate.

Again, graduates of the homeopathic and eclectic schools attend the regular post-graduate schools and the foreign universities side by side with the regular physicians, and I speak with positive knowledge when I say that there are few among the best educated homeopathic and eclectic physicians who do not subscribe for one or more regular medical journals. The regular profession, on the other hand, fully and cheerfully recognizes that both the homeopaths and eclectics have done their share in behalf of medical science and have contributed toward greater care and exactness in drug-therapy. In the medical press—and of late more and more often—voices are heard against sectarianism, and the sentiment is slowly but surely crystallizing that there is but one science and art of medicine, and that minor differences in the treatment do not offer sufficient justification for the existence of separate schools.

(To be continued)

The Importance of Gastric Conditions

A Study of the Significance of Gastric Symptomatology

By A. L. BENEDICT, A. M., M. D., Buffalo, New York

EDITORIAL NOTE.—What does this symptom mean? What can we do to cure this case? These are questions that every physician has occasion to ask himself many times, and perhaps under no condition more frequently than when the symptoms point toward the stomach as the seat of trouble. Even the laboratory findings may mislead us. A correct interpretation of the symptomatology may save (and frequently does) from an unnecessary surgical operation. These are some of the things pointed out by Dr. Benedict in this very important article, which will help toward intelligent treatment.

THIS article would be inexcusable, were it not for the swing of the pendulum of medical thought, from the ridiculous extreme of catheterizing the stomach as a matter of routine without diagnostic or therapeutic excuse and the neglect of sub-jacent organs, to the equally fallacious notion that the stomach is, physiologically, of little value, and that, symptomatically, it is at best a barometer of nervous and reflex influences.

Gastric Symptoms, While Overrated, Not Unimportant

By actual count of serial cases, the writer has found that gastric symptoms, ordinarily so considered, indicate gastric disease in only about twenty percent of cases—exactly twenty percent indeed for the hundred counted. Even this proportion is probably higher than would be found in a practice of unassorted cases, although the statement sometimes made, especially by those with a predilection for surgery, that gastric symptoms are almost always reflex or due to general neurotic states, is probably to be explained by neglect of exact means of diagnosis or the pursuit of some particular hobby.

Indirect Effects on the Stomach

It must not be forgotten that relief by hygienic treatment, the removal of some complicating or purely coincidental condition, or recovery after operation, as on a slightly abnormal appendix, does not necessarily prove the unreality of the gastric condition.

Rest and open-air life, in an appropriate climate, for example, may cause the disappearance of a bronchitis indisputably

established by easily recognized physical signs, and so it is not surprising that a careful diet and general hygiene may cure a functional—if there be such—disturbance of the stomach, a gastric catarrh due to superficial causes, and not to portal obstruction, or even an ulcer.

The relief of any local disease tends to increase the recuperative forces with regard to any other. An exploratory operation under anesthesia, followed by rest and a period of careful diet, may easily result in the recovery from various mild forms of gastric disease, even including ulcer, moderate degrees of dilatation, gastropnoia, and catarrh. The fact that gastric improvement followed after removal of an appendix which was found "infiltrated with round cells," a virginal uterus was dilated or straightened, a cervical tear repaired, and such like, does not in the least prove that there has been no gastric disease. Indeed, excepting the operation itself, the treatment may have been quite appropriate to the gastric condition.

Conversely, it is only just to admit that when the stomach-contents have been analyzed, the stomach mapped out and appropriate gastric treatment instituted, the fact of relief does not by any means exclude the existence of some other lesion, surgical or otherwise, that ought to be attended to. For instance, one patient with a very insignificant state of gastric submotility and subsecretion was subjectively cured, and could not be induced to have an operation for a tumor, rising from the pelvis into the lower abdomen, almost as thick and as long as the forearm.

It is conceivable, not only that eye-strain may induce nausea and vomiting or even reflexly lead to definite gastric symptoms, but that the relief of the latter, by attention directed toward the stomach, may render the patient irresponsive to the strain of slight refractive errors.

The ordinary conception of eye-strain, in relation to the stomach, reminds one of the hostler who conceived the idea of giving medicine to a horse by blowing it into the animal's mouth through a tube. Some time later our good man was found behind the barn, very pale and with a perfectly empty stomach. In reply to a question, he explained that "the horse blew first."

In the discussion as to eye-strain, the ophthalmologists have "blowed first."

One of the most typical case-histories of gastric reflex from eye-strain that the writer has encountered occurred in the wife of an oculist. On having this fact pointed out to him, the husband stated that her eyes were so near the theoretic norm that he had used her vision in a series of research work along optical lines. Relief followed attention to the gastric condition.

One important fact that oculists generally do not seem to realize is that eye-strain, as a term for gastric symptoms, may be employed in quite a different sense from that of chronic gastric disturbance in a person with uncorrected—or improperly spectacted—refractive errors. Allusion is made to certain cases of car-sickness, vomiting, even with a close approach to transient achylia gastrica, or various phases of sick-headache, "acute indigestion," etc., following long exposure to bright sunlight, especially if the patient has been intently viewing moving objects or stationary objects from a moving vehicle, or has read by a dim or flickering light.

Whether the eyes are refractively normal or not, such cases are much more frequently due to eye-strain than those ordinarily so called. With regard to the latter, the only rational view is that either the eyes or the stomach, or, perhaps better yet, both, may be the essential factor. While either the oculist or the gastroenterologist may be justified in treating the case from his own standpoint provisionally, each should be

broad enough to seek the services of the other, if indicated by more than a transient continuance of symptoms, just as in regard to abdominal conditions already alluded to.

Anatomic Lesions of the Stomach

It is unnecessary to argue as to the actuality of such gastric lesions as ulcer, cancer



DR. A. L. BENEDICT

dilatation and ptosis, or even gastritis of various grades. But, even at this date, the necessity for exact methods of diagnosis and the relative efficacy of medical treatment, either local or based upon detailed diagnosis, are not fully realized.

The off-hand way in which certain gastric lesions are diagnosed and treated by operation—usually gastroenterostomy by those who neglect exact diagnostic measures—is appalling to one who realizes that, however great the previous experience, it requires hard, painstaking work in all but the most conspicuous cases, to find out just what the present condition is. For instance, the writer saw just before a gastroenterostomy,

to relieve pyloric obstruction, a patient whose stomach-contents, within a week, had shown no stagnation and only trivial secretory abnormality, who had shown on physical examination a normal-sized stomach, and no excess of peristalsis. The patient recovered from the operation, but, of course, was not benefited. Such malpractice justifies extreme discourtesy, just as much as if the writer, for example, without surgical skill or equipment, should attempt a celiotomy in his office.

Gastric Ulcer

There are a good many different kinds of gastric ulcer, it is by that term we mean what we would for any other part of the body—a superficial dissolution of continuity. After adverse criticism from various sources, for several years, the writer still maintains that barring the rare instances in which direct inspection is feasible, either by section or the use of the gastroscope, a gastric ulcer cannot be diagnosed without the demonstration of blood. Even blood does not necessarily mean a gastric ulcer, but the diagnosis must be further established by differentiation. However, until blood appears, gastric ulcer cannot be diagnosed although its presence may be inferred, sometimes with much probability, from other indications.

Generally speaking, one hesitates to use the tube in a case supposed to be gastric ulcer, although in cancerous and other dribbling forms hot styptic solutions, hydrogen peroxide, and so forth, used by lavage, may be of great service.

Very few practitioners realize that the contraindication to gastric intubation leaves us in a state of almost absolute ignorance as to the chemic features of gastric ulcer. The ordinary idea seems to be that this lesion is due to self digestion, and that, even if hydrochloric acid is not the direct cause of the eating away of the gastric wall, hyperchlorhydria is either the cause of the increased digestive power or, at least, an accompaniment or forerunner of ulcer.

Ulcer and Hydrochloric-Acid Secretion

A few years ago, Ewald collected statistics showing that in or after gastric ulcer hyperchlorhydria was by no means the rule.

Unfortunately, much of the apparently statistic evidence was vitiated by lack of exact methods of investigation. The writer cannot recall a single case of hyperchlorhydria that has eventuated in frank gastric ulcer. Most of his experience with this condition has been of a nature precluding gastric tests, before or after.

It should be remembered, however, that gastric ulcer is not a common condition, especially if only fulminant cases of peptic ulcer are considered, and many of these patients die. One patient who vomited about a gallon of blood in forty-eight hours subsequently showed hypochlorhydria and within fifteen years since has had no further stomach trouble. A patient seen in consultation shortly before January 1, 1909, for rather copious gastric hemorrhage was shown, in the summer, to have complete achylia gastrica. Recently he has had a single mild attack of hematemesis. In November the patient returned to Buffalo, and the stomach below the ribs could be palpated on account of a general induration of the wall. The abdomen was opened, contrary to my advice at so late a period, and an inoperable cancer found. The patient died a week later.

The point to be emphasized is that we really know almost nothing of the relation of gastric ulcer to secretory states and that there is absolutely no reason for considering hyperchlorhydria as a precursor or the result, except by some specious *a priori* logic and upon the basis of a very few accurate analyses, but which are balanced by contrary findings.

Gastric Cancer

In regard to gastric cancer, it should be frankly admitted that up to date there is no means of making a positive or even probable diagnosis in time for radical operation. Naturally, in a patient of rather advanced years, who has lost flesh, complains about his stomach, and has deficient hydrochloric acid and an excess of lactic and other acid products of fermentation, we think of cancer; still, if the case is really of this nature, the diagnosis will usually have been made too late, while, on the other hand, the majority of cases with this symptomatology prove to be nonmalignant.

While ptosis and dilation have many etiologic and symptomatic points in common, and may be associated, it is important to make a sharp distinction by locating, not only the greater curvature, but the whole stomach, either by auscultatory percussion or radiography. The latter method was first practised by the writer in July, 1897, after some months of preliminary experiment with iron tablets and bismuth, which failed on account of imperfection of apparatus or lack of experience in locating the shadow. But the former method is less troublesome, free from danger, and, as checked by x-ray picture in many cases, nearly always reliable.

Gastritis, or Gastric Catarrh

The diagnosis of gastric catarrh, or gastritis, is by no means easy. We may beg the question by holding all "functional" secretory conditions to be due to a true gastritis, or by acknowledging, as is probably correct, that practically all stomachs, under the more or less inevitable irritation of ingesta, are always subject to inflammation in small areas.

In acute and subacute gastritis, the almost certain effect of the etiologic factor renders diagnosis easy by induction. So, too, in chronic cases of gastric disturbance with well-marked hepatic sclerosis, we are practically justified in jumping at the conclusion that an inflammatory, or more properly catarrhal, condition of the stomach is present. But without these conspicuous etiologic indications, all possible information is required—chemic, macroscopic and microscopic—to enable a genuine diagnosis.

Many textbooks make what seems to the writer an error in emphasizing the question as to whether gastric catarrh *or* dilation, ulcer, stagnation, and so forth, is present. Gastric catarrh is preeminently an accompanying condition of various other disturbances.

"Routine" Tests of Stomach-Contents Not Advised

The writer would by no means go so far as to advocate routine examination of the stomach-contents in general practice, even when digestive symptoms are present. Nor are we entirely unable to judge with sufficient accuracy, for practical purposes, what the

condition of the stomach is chemically and mechanically. Yet, with increasing experience, a personal conviction of the dangers of guesswork and a more and more humble opinion of one's ability to draw conclusions from symptoms and external examinations alone, tends to develop.

Some symptoms that have been emphasized as reliable fail utterly in the writer's experience. For instance, pain and the tender point supposed to characterize ulcer are often present in cases that, after prolonged observation and various tests, seem to warrant the exclusion of this diagnosis. The formation of gas would appear to be incompatible with a persistent hyperchlorhydria, and so far as fermentative gas is concerned, this rule is correct.

However, hyperchlorhydric patients very commonly complain of gas. As a matter of fact they seldom do have any more gas than is to be accounted for by the almost inevitable swallowing of air. But the irritation of the superacid gastric contents often produces a sensation of distention, the patient tries to belch, and often succeeds in getting up a little gas. In either case he is likely to complain of this symptom. Indeed, he or more frequently she—may develop aerophagia, which is essentially a sort of exaggerated hiccough, air being drawn into and expelled from the esophagus without reaching the stomach at all.

An entirely different kind of gas formation is wholly physiologic, being due to the meeting of the acid gastric contents with alkaline carbonates in the duodenum. If, for any reason, the pylorus is patulous, the carbon dioxide generated may enter the stomach in considerable quantities. In such cases, also, the bile which enters the stomach acts as a rough indicator of acidity. If the stomach-contents are yellow we may be practically certain that little or no free hydrochloric acid is present. On the other hand, green chyme, though occasionally due to a hyphomycetes, usually indicates normal or else excessive hydrochloric acidity.

Other Factors Involved

It must not be forgotten that much may be learned from the stomach-contents aside from the formal chemic examination. The

degree of rapidity with which the stomach empties itself may be much better judged from actual withdrawal of residue than from statements made by the patient or by physical examination. For this reason, if for no other, it is important to use a good-sized tube and to siphon out all the chyme. The relative fluidity of chyme is also important. Patients who declare that they masticate thoroughly may be contradicted by their own chyme, as in one case in which a piece of meat as large as the palm of the hand was vomited alongside the tube. Carelessness in habits of eating, as shown by bread labels, fragments of bone, splinters of wood, and so forth, may not be demonstrable except by abstraction of the stomach-contents.

The diagnosis of gastric disease by microscopic appearances of cells and shreds of mucosa is by no means so clear and easy as might be thought and as has been declared, but it is not to be neglected.

The differentiation of gastric and pancreatic proteolysis by the nuclear and connective-tissue tests has recently been shown not to be absolute.

Furthermore, the whole line of tests based on the hypothesis that some substances are dissolved in the intestine and not in the stomach, and, therefore will, by the appearance of a reaction in the urine, indicate gastric motility, is utterly unreliable. At present fecal examinations are in fashion, but, while of great value, they cannot, because of complicating factors such as bacterial decomposition and the impossibility of sharp limitation of time, be expected to yield the exact information of gastric tests.

Moreover, the state of the chyme has a very practical influence on intestinal digestion. Gaultier has emphasized the retardation of fat digestion by gastric superacidity. Granting that the food is well masticated, and not markedly abnormal in kind and amount, that there is not a diarrhea nor an extremely marked failure of bile and pancreatic juice, bacteria usually destroy starch, sugar, soluble albumin and peptones not perfectly digested and absorbed. Thus, exact methods applied to feces are pretty well limited to the study of fats. Hence, from a double stand-

point, it is imperative to check fecal by gastric analysis.

As to Intestinal Indigestion

The facile use of the term "intestinal indigestion" is misleading. Generally speaking, we cannot detect the exact nature of the indigestion nearly as well as in the case of gastric indigestion, and, indeed, the term is often used without much justification.

For instance, a recent case thus diagnosed showed no abnormality according to the ordinary test, though it must be admitted that there was no inauguration of accurately measured test diet and quantitation of fats. Examination of the stomach-contents showed isochymia, an accumulation in an hour of nearly as much gastric juice as the volume of the original test meal, and a hyperchlorhydria. While Schmidt's method showed no abnormality in fat digestion, unquestionably Gaultier's quantitative estimate of fats of different kinds, after instituting a measured diet rich in fats, would have shown such abnormality. But even then the gastric analysis would have been necessary to determine the exact cause and to exclude an intrinsic failure of one of the various functions of the intestine and its tributaries.

Consider the saving of time, trouble and even expense accomplished by the gastric analysis.

Common Sense Must Be Added to Clinical Testing

In conclusion, it may be remarked that, if one starts with the former exaggerated notion of the information to be derived from stomach-contents, especially if one fails to correlate the symptomatology and physical examination or even the little practical hints to be derived from careful inspection and microscopic examination of stomach-contents with the formal chemic analysis, disappointment is inevitable.

In the great majority of instances, any single diagnostic examination results negatively. The examination of the stained smear of blood, the tests for albumin, sugar, indican, acidity, bile-pigment, quantitation of any single ingredient of the urine, etc., in the great majority of cases leave one without any particular information to credit to the individual test. Yet, every little

while, a particular one of these tests establishes a diagnosis and suggests appropriate treatment.

In the writer's experience, of all the clinical laboratory tests, the one for the detection of urinary indican reacts positively most frequently. Next in frequency something definite is found in the routine gastric tests. Even a negative and apparently unjustified examination is of value by excluding a potential diseased condition.

Some degree of common sense must be applied in the advance estimation of the relative necessity of such a test and in interpreting results.

As a general rule, if we do not look for things, we shall not really find them, and if we neglect gastric analysis or any other line of diagnostic work, we shall have an undiagnosed mass of obscure cases, with only a few definitely forced upon our attention. Hence, the value of this work should be manifest.

Solanum and Its Alkaloid

A Study of Solanum Carolinense, with a Record of Experience

By J. M. FRENCH, M. D., Milford, Massachusetts

ATTENTION was called to this plant by Porcher, in his "Report on the Indigenous Medical Plants of South Carolina," about the middle of the last century. He quotes from a French work on materia medica, showing that Valentin had made use of the berries in the treatment of idiopathic, or nontraumatic, tetanus, previous to 1837. He also refers to an article in a French medical journal, which gives a notice of the different methods of treating tetanus in America, with observations on the good effects of *solanum carolinense*. According to Porcher, this plant also possessed some reputation among the negroes of South Carolina as an aphrodisiac. (Felter and Lloyd.)

But little attention appears to have been paid to this report by the profession generally, and *solanum* does not appear to have been used in this country to any considerable extent until near the close of the century, when attention was again drawn to its medical properties, this time by Dr. J. L. Napier of South Carolina, through the columns of *The Medical World*. This writer states that he had accidentally learned from the negroes that the plant was useful in "fits." Acting on that information, he prepared for himself a 20-percent tincture, which he began using in epilepsy, eclampsia, and all convulsive disorders, and with remarkable success. He further mentions

that the bark, root, and berries are all made use of. (*Medical World*.)

Since that time the properties of this plant have been studied by a large number of observers, both clinically and chemically, and its use has gradually extended, the general verdict being that it is a remedy of great value in all convulsive disorders. Its chief use, however, is in epilepsy.

Botanical Characters

Solanum carolinense (synonyms, horse-nettle, bull-nettle, sand-brier, treadsaf, treadsoft, ground-potato) is a member of the natural order Solanaceæ, or Nightshade family, to which we are indebted for a considerable number of valuable medicinal plants. It is a perennial herb, growing from eight inches to eighteen inches high, being found in waste places and cultivated fields from Connecticut to Iowa and southward to the Gulf of Mexico; also in South America.

Preparations and Constituents

Solanum is not official in the United States Pharmacopeia. There is, however, a fluid extract in use, and the eclectics employ the "specific medicine" *solanum*, which is made from the root of the plant and is probably the best liquid preparation of this drug. There is also a tincture, prepared from the entire plant. A tincture of the berries is sometimes employed.

Chemical analysis shows that the chief active constituent of *solanum carolinense* is an alkaloid known as solanine, with smaller proportions of solanidine, and, according to some observers, solnine; also an organic acid known as solanic acid. The most important constituent is the solanine, and this is also the most abundant, solnine existing to the extent of only about 7.6 percent of the solanine-content. The fruit is found to be the most active part of the plant, containing the largest proportion of the active constituents. After this come the root, leaves, and stem, in the order named.

Solanine is by some classed as a glucoside, and by others as a glucosidal alkaloid. It does, in fact, possess glucosidal properties, inasmuch as it can be broken up into glucose bodies, yet the fact that it combines with acids to form salts classifies it, undoubtedly, as an alkaloid. It is also the principal alkaloid found in the entire group of Solanaceæ. It occurs in white, exceedingly fine, bitter-tasting crystals, is insoluble in water, slightly soluble in ether and in cold alcohol, and considerably so in hot alcohol. The hydrochloride of solanine is an amorphous white powder, readily soluble in water.

As solanine is the representative principle of *solanum carolinense*, and as the alkaloid has been more carefully studied than the galenic preparations of the plant, we shall consider that the action of the plant as a whole is mainly—though not entirely—that of the alkaloid.

Physiological Action

Solanum carolinense is a plant having a very decided and powerful physiologic action, upon which its therapeutic uses are definitely based. Moreover, although this drug cannot be said to be in common use, yet its physiologic action has been thoroughly investigated by competent observers, and its fundamental properties, upon which all observers are agreed, have been placed fully on record. Among all observers, no one has given a clearer and more complete statement of its properties than Brunton. The others only complete and slightly modify his statements.

"Solanine, in warm-blooded animals, paralyzes the central nervous system, without af-

fecting the peripheral nerves or the voluntary muscles. It slows the heart and respiration, lessens sensibility, and causes death with convulsions. The temperature constantly falls. The pupil is unaffected. It produces weakness, labored breathing, vomiting and drowsiness, but no true sleep. There is no increase of action on the part of the bowels, kidneys or skin."—(Brunton.)

"It lowers the irritability both of motor and sensory nerves." (Nothnagel.)

"In fatal cases of poisoning by plants containing solanine as their active principle, it has caused gastrointestinal irritation, with an acrid burning sensation in the throat as the first symptom, followed by great restlessness, muscular and fibrillary tremors, labored respiration, dryness and hyperesthesia of the skin, rapid pulse, collapse and coma, the temperature falling markedly before death. Albuminuria is usual." (Riley.)

"The first evidence of solanine action seems to be the acrid burning in the throat, decided toxic action being indicated by oppression of the respiration. The first-named symptom, then, would indicate the full therapeutic effect, and the remedy should be discontinued or given only as this symptom subsides." (Waugh.)

"The symptom of acrid burning in the throat is not constant, nor is it a reliable index that the patient has received the largest quantity that should be administered before a reduction is made in dosage; and an extensive use of the drug has shown that unless the dosage is carried until the cortical centers are affected—which is evidenced by a condition of drowsiness and stupor—the result will be disappointing." (Thrush.)

Therapeutic Uses

1. As an antispasmodic and sedative, in all convulsive disorders, such as epilepsy, chorea, tetanus, hydrophobia.

2. As an antiepileptic, especially in cases of grand mal, severe and long-continued, and when the mental faculties are badly affected.

3. In cortical, or Jacksonian, epilepsy. This is according to a somewhat limited experience only, and may or may not be borne out by further trial.

The symptoms of drug-sufficiency are: an acrid burning in the throat, followed by oppressed respiration.

The full physiological action of the drug, within the limits of safety, is indicated by sensations of drowsiness and stupor.

The most important applications of solanum thus far appear to have been in the treatment of epilepsy, and it is in its use in this disease that I have given it most attention.

Personal Experiences

The first case in which I made use of this drug was one in which I had previously obtained considerable good from verbenin, but the benefit stopped short of a complete cure, and in one of the relapses, I decided to try the effect of the solanum carolinense. I employed the "specific medicine" of the eclectics, with the result that the patient while taking it suffered from the severest convulsive attacks she had ever experienced. I then stopped its use and returned to verbenin, with good results. She has continued the use of the latter preparation ever since—a period of more than five years—with favorable results.

This experience caused me to use no more solanum for some time. But finally, by a comparison of my own results with those of others, I came to understand that each of these remedies has its own field in this disease, and that in cases where one of them is acting favorably it is not probable that the effect of the other will be equally favorable. It is true that some observers have reported good results from the alternate use of these two drugs; but I am not a convert to this method. What I am looking for is the exact indications for each drug, the conditions in which each is superior to any other known drug or remedy. If we can find these conditions, we shall not need to employ them in combination, or alternately, unless because of a change in the conditions.

In another, later, case in which solanum has done me good service, I was led to use it from the fact that verbenin did the woman no good, but rather seemed to make her worse. I afterward learned that her previous physician, who was a friend of mine and knew of my use of verbenin in this disease,

had given her the same remedy, with the same result of making her worse instead of better.

I then began giving the woman the "specific medicine" solanum, starting with 3 drops at a dose (which I now know was too small even for a beginning), gradually increasing, as seemed to be needed, up to as much as 15 or even 20 drops three and sometimes four times a day (before meals and at bedtime.) Some of the time, especially of late, I have given her, instead, the granules of solanine for the same purpose, and have found that one alkaloidal granule of 1-67 grain is the equivalent of at least 5 drops of the "specific medicine." The effect of either of these forms of the drug has been most happy, as by means of them she has been able very largely to control the trouble, which in her case consists of localized spasms, occurring principally at night, affecting the muscles of the forehead and those about the eyes, and without loss of consciousness—the form known as cortical, or Jacksonian, epilepsy.

Prof. G. H. French of Carbondale, Ill., gives as the differential indications of the two remedies, that verbenin is the preferable remedy in cases where the source of the convulsions is visceral, while solanine is effective when the source is central or cerebral. He illustrates his theory with numerous cases where the convulsions were produced by such causes as phimosis, cervicitis, intestinal parasites, and inordinate eating, in which—the cause having first been removed—the cure was effected by verbenin; while in others, where the cause is cerebral or perhaps cerebrospinal, verbenin only made the case worse, while solanum or solanine, properly used, produced a cure.

These things seem to me to indicate that in the comparatively mild cases, and especially those in which the convulsions are brought on by a definite cause, which can be determined and in a greater or less degree removed, verbenin is the agent best adapted to produce that sedation of the convulsion-center which leads to a cure; while in the more severe ones, where no peripheral cause can be determined, or if determined cannot be removed, a more powerful influence upon the reflex-center is needed, and this is fur-

nished by solanum, or perhaps better by solanine, the alkaloid, given if necessary up to the full physiologic action.

In a word, *solanine* has all the beneficial effects of the bromides, and even more powerfully, without their injurious by-effects.

The homeopathic use of solanum carolinense is thus described by Dr. Boericke, in his "Pocket Manual of Homeopathic Materia Medica:"

"Convulsions and epilepsy, 20- to 40-drop doses; is of great value in grand-mal of idiopathic type, when the disease has begun beyond the age of childhood; in hysteroid-epilepsy, also in whooping-cough."

The hypodermic use of solanum is advocated by Dr. Frank Webb of Bridgeport, Conn., in a paper read before the Connecticut Eclectic Medical Association and published in *The Eclectic Medical Gleaner* for September, 1909, as follows:

"Specific medicine solanum is rightly named specific, for the hypodermic use of it is as near an absolute specific as any drug can be in any form of epilepsy, puerperal convulsions and hysterical convulsions. I have cured one case of epilepsy that had resisted all other means. At the time of the seizure I gave the hypodermic once every three hours for four doses, fifteen drops at a dose, followed by the internal use of it, and there has been no return of the symptoms since. I wish to say in regard to this case, it had resisted solanum by mouth for three years; it would control the paroxysms but not prevent them. By the hypodermic method it has not returned in eleven months. The dose, as I stated, was 10 to 15 drops."

This is a suggestion which may prove of value. It seems to me, however, that the alkaloid solanine would be preferable to any alcoholic preparation for hypodermic use.

Improved Methods in Surgical Anesthesia

By EMORY LANPHEAR, M. D., Ph. D., LL. D., St. Louis

Professor of Clinical Surgery, American Medical College, St. Louis

EDITORIAL NOTE.—Among the interesting features of the great Congress of the Surgeons of North America, held in Chicago in November, was a clinic conducted at the Cook County Hospital by Prof. John Dill Robertson, President of the Bennett Medical College and Head of its Department of Surgery. This clinic was characterized not only by the skill of the operator and the interesting character of the cases treated, but also by the fact that the hyoscine-morphine-cactin method of anesthesia was employed by him. Prof. Emory Lanphear, of St. Louis, was present at this clinic and on invitation of Prof. Robertson, explained to the audience the anesthetic method used and made some interesting remarks concerning improvements in the technic of inducing anesthesia by the supplementary use of local anesthetics. His address follows:

IN the selection of an anesthetic the surgeon is guided chiefly by two things:

First the safety and second the efficiency of the agent employed. The hyoscine-morphine-cactin anesthesia used in the cases in this clinic has now been under experimentation and investigation for several years. It has been vigorously attacked and as energetically defended. Principally the attacks upon it have been made by men inexperienced in the use of the anesthetic and, therefore, opposed to it upon theoretic rather than practical grounds. The men who have defended it, on the other hand, have been

those who have used it extensively, including, perhaps most prominently, Prof. Robertson and myself. In my own work and under my direction this anesthesia has been employed in considerably more than two thousand operations. This large series of anesthetics has been attended by only one death, and that from anuria. This suppression of urine, however, is liable to occur in any type of anesthesia—ether, chloroform, or hypodermic—and, therefore, in so large a number of cases this single accident can scarcely be ascribed to this peculiar type of anesthesia.

Dr. Robertson, I am informed, has used this form of anesthesia in almost, if not fully, as many cases as I have, and without a single death ascribable to the anesthetic. These two reports, it would seem, ought to be sufficient to assure even the most bitter enemy of hypodermic anesthesia of the safety of hyoscine, morphine and cac-tin as an anesthetic agent. Certainly the record is in strange contrast to the early experience with an impure scopolamine-morphine anesthesia and is an evidence that an H-M-C

tablet, so much condemned by its enemies, is far superior to the scopolamine-morphine advocated by some other operators.

The method of employment is important, because improper use gives unsatisfactory results. The method now employed in most cases is to give the initial dose, one full-strength tablet, three hours before operation, and a second dose one and one-half hours before the operative work is begun. If the patient is not in profound anesthesia, as is often the case, a few drops of chloroform, as demonstrated in the case now under operation, may be given. Under its influence the patient soon sinks into a quiet undisturbed sleep during which the operative procedures may be carried out without further chloroform or ether in the majority of cases.



DR. JOHN DILL ROBERTSON

A brilliant young Chicago surgeon who has come to the front within recent years. Dr. Robertson is President of Bennett Medical College, which he has converted from an eclectic to a regular school, and is Head of its Department of Surgery

As to the efficiency of the anesthesia, it may be said that the two doses administered as just advised produce a perfect anesthesia of several hours' duration in weak patients and in those especially susceptible to the morphine-hyoscine influence. Other patients, apparently less susceptible to the action of these drugs, manifest considerable restlessness during the operation, and frequently these patients have to be spoken to rather sharply several times during the work. While these patients seem to be suffering con-

siderably at the time of operation, almost without exception there is no memory of the pain of suffering the day after the operation. This restlessness is particularly apt to be manifested upon incising or sewing the skin and upon the pulling of delicate structures like the peritoneum. On account of the restlessness which sometimes interferes somewhat with the manipulation of the operator, for certain cases we have recently adopted a modification in the technic of producing anesthesia.

Modification of Anesthetic Technic

If operation is to be made early in the day, a full-strength dose is given at bedtime on the night preceding operation. This insures a perfect night's rest, allowing the patient to come to the day of operation without the

nervousness and anxiety which often constitute such an annoying part of surgical treatment. Patients often say that did they not have the dread of the operation in the hours immediately preceding the operation while preparations are being made (often in the presence or within the hearing of the patient) there would be far less hesitancy in accepting surgery as a curative measure. This preliminary injection thus robs the operation of much of its terror and, therefore, constitutes a very important therapeutic indication.

About one hour before the operation another full strength dose is given. The patient then is brought to the operation-room fairly drowsy and is given positive assurance that no pain or discomfort will be inflicted. Along the line of incision, however extensive it may be, syringe-ful after syringe-ful (if necessary) of anesthaine is injected directly beneath and into the skin. No attempt is made to throw this stovaine solution into the deep tissues because another agent is to be employed for anesthetizing the deeper structures. The latter agent is a 1 or a $\frac{1}{2}$ percent solution of hydrochloride of quinine and urea, that is, two decigrams of the quinine urea salt are dissolved in thirty Cc. of distilled water (i. e. three grains to the ounce), and any part or all of this may be injected into the deeper structures to be cut. The most extensive operations may be performed under the influence of this combined anesthesia without the least discomfort or suffering on the part of the patient.

Advantages of the Local Anesthetic

The advantages of the anesthaine solution and the solution of quinine and urea are:

First, that they each may be boiled without destroying the anesthetic property, therefore rendering absolute sterility possible; an ideal condition not obtainable by any other form of local anesthetic.

Second, the anesthesia produced by this method lasts for many hours, and in some cases for days, so that postoperative pain under this method of producing anesthesia is a thing of the past. Those who have undergone operations are alone capable of appreciating this great advantage; indeed,

the abolition of postoperative pain and nausea and vomiting constitute in my opinion the greatest advance in anesthesia that we have ever known.

The only precautions necessary to remember, perhaps, are first that this type of anesthesia should not be employed anywhere within the throat; should not be used with very young children, nor with patients more than eighty years of age. In the last-named type of cases half doses of the H-M-C are sometimes permissible, and the anesthaine and quinine-and urea solutions may be used without any fear of causing trouble.

Use in Obstetrical Practice

To the average practitioner, perhaps the most interesting feature of this form of anesthesia is the possibility of its use in obstetrical practice. Properly used the H-M-C anesthesia robs childbirth of its terrors. The method which has seemed to give the best results is to inject a full-strength H-M-C tablet at that period of labor when the pain becomes distressing. Generally the one dose is sufficient, if it is supplemented in an hour or two or three with a single dose of 1-100 of a grain of hydrobromide of hyoscine. The method of determining whether or not the hyoscine is indicated, or a repetition of the hyoscine needed, is "memory test."

For this test, the accoucheur exhibits to the patient some object, say, a watch or knife, when the effect of a hyoscine, morphine and cactin injection appears to have worn off. He asks if she can see and recognize what this object is. In ten minutes he asks her if she remembers what it was he showed her a few minutes ago. If she does not remember what the object was, nothing more is now needed, however much she may complain of the pain at the time, for there will be no memory of it next day. If, however, she does remember what the article was, the indication is plain for the use of the 1-100 grain dose of hyoscine hydrobromide hypodermically; and this may be again repeated in one or two hours if necessary. Usually the one full-strength dose of H-M-C and one injection of straight hyoscine hydrobromide will be all that is required to carry the patient through an otherwise long and tedious labor.

In extreme cases, and particularly in delayed labor, a second dose of the H-M-C may be needed, in which case only one-half strength doses should be employed. Properly used, as already stated, this anesthetic agent gives a labor the pain of which is not remembered by the mother the next day after the delivery.

In a primi para, where it is evident that the perineum is likely to be torn and will have to be repaired immediately af-

ter delivery, it is well to inject a syringe of anethaine into the skin and perineal muscles when the head begins to press strongly upon the perineum; or a syringe of quinine and urea may be used instead. This will so deaden sensation in these tissues that a very extensive tear may occur and the injury be repaired without the knowledge of the patient.

Much criticism of this method of delivery has been aroused—for various reasons. The only valid objection is that if the drug be administered too near the conclusion of labor there may be some difficulty in getting the child to breathe. This, however, is not a serious objection if the obstetrician immediately resorts to artificial respiration for a minute or two after delivery of the child; and after he has learned to use the agent properly there will be no further trouble from "blue babies."

Occasionally one will find a fanatic who opposes the use of the H-M-C anesthetic in labor, from so-called religious motives. For



DR. EMORY LANPHEAR

The well-known St. Louis surgeon, with whose work the readers of *CLINICAL MEDICINE* are familiar.

example, when I first advocated the use of this form of anesthesia in labor an old doctor in Ohio wrote me: "For God's sake, Doctor, cease advocating this measure in obstetrical work. If you do not, God will condemn you to eternal punishment, for he has said in his holy book, 'Henceforth, in pain shalt thou bring forth thy young.' So, my dear Doctor, I pray you that to save yourself from eternal torment you will not seek to induce doc-

tors to use this anesthetic and so upset the laws of our Creator."

I replied to him: "I am perfectly satisfied to take my chances of eternal torment if I can in the future relieve suffering women from the tortures of childbirth."

[It is not easy for a surgeon to push his way to the front in Chicago, but that is what John Dill Robertson is doing. Beginning with all the handicaps a man could have, he has made himself known as a power that must be reckoned with. He quickly saw that the day for sectarian schools in medicine was gone, and convinced his colleagues in the faculty of Bennett that this was the case. The phenomenal rise of this college since Prof. Robertson took the helm confirms his judgment and vindicates his leadership.]

Dr. Robertson is still a young man for a surgeon, but the man who before he is forty has made himself a place among Chicago's great surgeons has splendid possibilities before him.—ED.]

The After-Treatment of Hand-Lesions

By RALPH ST. J PERRY, M. D., Parkers Prairie, Minnesota

EDITORIAL NOTE.—Dr. Perry's exceedingly interesting series of articles, which deals with the common lesions of the hand with which every general practitioner must be more or less familiar, will be continued next month and in succeeding issues of "Clinical Medicine."

II

REMOVAL OF INITIAL DRESSING

WHEN the time comes to remove the initial dressing there should be the same aseptic and antiseptic precautions as at the time of the operation. Even in a wound which is known to be infected or suppurating, carelessness may add a new infection, prolong the activity or enlarge the field of the existing one.

Remove the dressings carefully and without haste, cutting away from adherent portions with the scissors and soaking these adherent portions in warm saline solution until they soften up sufficiently to be removed.

Just as soon as the dressings have been removed, and *before cleansing the wound*, note carefully the amount, color and consistency of the discharge and the wound's odor; look for necrosed tissue, loosened and macerated, calloused epidermis, and examine the surface for the appearance of granulations. (Fig. 14.) This first inspection of the healing wound will reveal to the experienced surgeon a great deal that is of value regarding the condition of the wound, the probable course and duration of the healing, the character of the result which may be expected, and the nature of the future treatment.

Having noted all these points, the wound is washed with a warm saline or mercuric-cyanide solution, either by gentle irrigation from a fountain-syringe (Fig. 15) or dripped or run over the surface from a gauze or cotton mop. (Fig. 16.) If a syringe or irrigating tank be used, it should not be over three feet higher than the hand, as a greater fall gives too much force to the jet and may damage the healing tissues. After washing away the fluid portions of the discharge, there may be seen semisolid portions, more firmly adherent, which can be gently

wiped away with a cotton mop, or else some dried particles, and these are best loosened by applying hydrogen peroxide or iodized gasolin. (When using hydrogen peroxide upon a wound surface, the most efficient—and economical—way is to dilute it with an equal part sterile water and apply with an



Fig. 14. Carefully inspect the wound

atomizer or a medicine dropper, as shown in Fig. 17 and 18). After effervescence has subsided, rinse off the loosened particles with saline or mercuric-cyanide solution, repeating the procedure until the absence of reaction shows the wound to be clean.

Any necrosed tissue which adheres in spite of this cleansing may now be snipped away with small curved scissors (Fig. 19), so also skin tabs and portions of callosities which may have loosened up along the edges of the wound. The edges and surface of a



Fig. 15. Washing the wound with an irrigator, using operating pad and a slop-jar.

wound should be kept scrupulously clean and free from necrotic or macerated tissues, as these tender to harbor decaying discharges, offer a site for new infection, help to spread the existing infection, and prolong the healing.

After the cleansing of the wound comes the application of the new dressing, which may be a repetition of the first or such alteration thereof as existing conditions may call for

Management of Purulent Wounds

In all purulent cases, the dressings should be changed daily, or oftener if needed, and the wound cleansed, as just described, for several successive days or until it is seen the wound is well filled in with granulations, the reparative process nearly completed and the discharge greatly diminished; after which the dressings may be changed every other day, then every third day, and so gradually less often as the healing progresses.

The odors of foul-smelling wounds, of iodoform or other malodorous applications can be measurably suppressed and partially overcome by a deodorant dressing made by

bandaging the wound in gauze dampened with compound tincture of benzoin, or with a 5-percent solution of formaldehyde

Where retaining or approximation sutures have been put in place at the first treatment but not drawn up and tied, this should be done as soon after the subsidence of inflammation and swelling as the condition of the wound shows that the parts can safely and advantageously be approximated. Most sutures are too tightly drawn; be careful not to err in this way.

After a scab or crust has formed, there will be no further change of dressings or



Fig. 16. Washing the wound, using a cotton mop and enameled pan.

cleansing of the wound, unless the crust be premature and pus is collecting underneath, in which case it should be removed and the dressings continued until a normal scab or crust does form. A scab should never be pulled or picked off, but allowed to remain in place until it falls off. The patient should be instructed on this point and warned to refrain from scratching or meddling.

The Hot-Water Treatment

The hot-water treatment, with its irrigators and drip-pans, has largely been super-

seded by modern methods, yet there are cases where the method is decidedly the most efficient and the most satisfactory both to surgeon and patient. In severe crushing

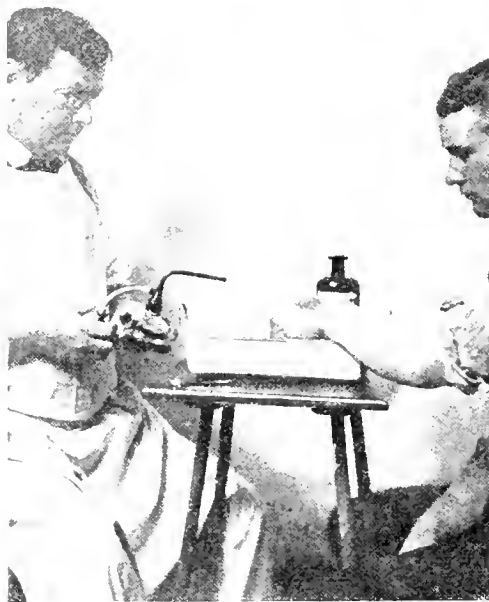


Fig. 17 Applying hydrogen peroxide with an atomizer.

and mashing injuries with marked reaction, great swelling and considerable pain, I believe a hot-water dressing, if carefully and thoroughly carried out, will do an immense amount of good.

The paraphernalia necessary consist of a large fountain-syringe or other suitable reservoir, with rubber tube (with stopcock or clamp) connection to a dripping tip; a pan or trough in which the hand can lie and which has a drain pipe and tube leading to a bucket on the floor. A satisfactory dripping tip can be constructed of a piece of rubber tube by sealing one end with wax and burning with a red hot needle a line of small holes on one side. The apparatus, when in use, may be suspended over the side of the bed or laid on a chair alongside of the patient.

In using, the hand is rested upon a bed of oakum or jute in the bottom of the pan, and over may be placed a layer of gauze, as deemed advisable; the dripping tip is laid lightly on top of the gauze or suspended horizontally an inch or so above the wound.

The drain-pipe and tube must be large enough to avoid easy clogging. The irrigating solution of plain or medicated hot water should be replenished from time to time, as required, while the gauze covering is changed as needed.

This method of treatment permits of easy examination by the surgeon, but it entails constant attention, day and night, and must not be entrusted to any other person than a paid nurse, whose remuneration and reputation depend upon work well and faithfully done. Others, be they relatives or neighbors, are prone to neglect or forget, or even to modify and meddle with the treatment, and thus cause failure.

Yeast Poultices

The yeast poultice is an effective method of treatment in cases where there is excessive



Fig. 18 Applying hydrogen peroxide with a medicine dropper.

reaction, where large sloughs develop and do not readily separate from the underlying healthy tissues, or wherever gangrene may threaten.

To prepare this poultice, take of beer yeast, one pint, and stir into it half a pint of finely sifted corn meal; set in a warm place

until it rises; then, into this dough, work one ounce of powdered charcoal. Spread the mixture freely upon a strong, clean cloth, and apply this directly to the wound surface. Renew every twenty four hours, as needed. The poultice becomes dry upon the wound and may adhere to the parts, but it can be softened by wetting with warm water and thus easily removed.

The Period of Granulation

Not every wound pursues the even tenor of its ways to a satisfactory recovery; there may come a stagnation of granulation, or an exuberance may cause trouble.

A healthy wound presents a surface studded with florid, red granulations about the size of a mustard seed bathed in a thick, creamy, yellow pus (the "laudable" pus of years ago), and is without pain, tenderness or edema.

Occasionally, however, the reparative process falters because of weak granulations, which become flabby, semitransparent, and lose their rich, red color.

Such a condition calls for stimulation, and a few applications of a weak solution of copper sulphate or zinc sulphate, or touching lightly with silver nitrate, will give them the stimulus necessary to incite new life and energy. A solution of ammonium chloride, consisting of 1 ounce to one pint of water, and one ounce of alcohol, is a most satisfactory revitalizer of weak and dying granulations, especially in cases where gangrene

threatens. Unfortunately its application causes some smarting and burning, and this discomfort has been allowed to overshadow its immense power for good. A 5 percent solution of trichloroacetic acid is also most excellent as a stimulating application, especially where a syphilitic element is involved.

Stimulation of granulations should not be persisted in for too long a time, lest irritation arise and thus do more harm than good.

Nourishing Applications for Granulating Wounds

Granulations which fail to respond to a reasonable amount of stimulation should be "fed," a process often called for in patients who suffer from general anemia. The technic of granulation feeding is as follows:

First wash the wound with normal saline solution, then treat with hydrogen peroxide, and repeat this process several times until the wound is thoroughly cleansed; gently dry the surface. Examine for necrotic spots, remove any necrosed tissues found, and again cleanse and dry. Now cover the wound surface with one inch-wide strips of plain aseptic gauze, these overlapping each other and extending an inch or more beyond the edges of the wound. In deep or irregular wounds pack the gauze very gently into all parts of the wound. Saturate this gauze with full-strength bovine, then apply a sterile gauze bandage. Over all wrap a single thickness of rubber tissue and apply the usual supporting dressings. Granulations should be fed at least once daily, and oftener in aggravated cases.

The pure bovine may, in some patients, occasion smarting or burning; if so, this can be prevented by diluting with normal saline solution, not to exceed to one-half. If continuous feeding of the granulations be desirable, the overlying gauze may be kept wet, without removing the protective dressings, by injecting the nutrient liquid into the gauze with a hypodermic syringe. If desired, the bovine can be rendered antiseptic by adding from 2 to 5 percent of iodoform or other germicide iodine compound. Nuclein may be used in place of bovine, or also in combination or alternated with it, in case the former alone does not seem to satisfy the requirements.



Fig. 19 Clipping away necrosed tissue.

Exuberant granulations, commonly called "proud flesh," are as detrimental to healing as the weak ones, and they are readily detected by their large size, gelatinous appearance, and rapid growth after rising high above the surface of the paratrauma. In their incipency, they may be subdued and checked by applications of mild caustics, such as burnt alum, as also by elastic pressure; but if fully developed and of large size, the best policy is to eradicate them by curettage or by cutting them away with the scissors, after which the tendency to exuberance may be checked by the mild caustics and elastic pressure. This treatment should continue no longer than necessary lest it hinder healthy granulation.

Skin Grafting

Where a large granulating surface exists and it is palpable that cicatricial contractions or deformity will follow unaided healing, or where it is manifest that much time can be saved by the process, it is advisable to resort to skin grafting. Skin from the patient or from some volunteer may be grafted according to the Wolfe-Krause method, using small grafts upon a well-cleansed surface. Experience has proven that Thiersch grafts do not prevent the subsequent development of cicatricial contractions. In many instances portions of skin may be transplanted *en masse* to cover the raw surface, leaving a pedicle attachment through which the circulation is maintained until the graft has become attached to its underlying tissues and established a new basis of nourishment.

Case 6.—Machinist. The back of the hand came in contact with a belt edge and a piece of skin as large as a silver dollar was torn away. The wound was cleansed thoroughly of dirt and grease, blood and serum, and then a piece of skin of the same shape, only one-half inch larger in diameter, was dissected from the side of the chest and transferred directly to the wound surface, stitched in place, and dressed with paraffin netting (q. v.) and iodoform gauze. In a few days it was manifest that union of the graft had taken place, and on the tenth day the sutures were removed.

The graft taken from the chest-wall was larger than the defect to be filled because of

the necessary allowance for the shrinkage which invariably takes place in the grafted skin when transferred to another site. The defect in the chest-wall skin was readily closed by loosening up the subcutaneous paratrauma and approximating the edges of the wound. A perfect result was secured both on the hand and chest.

Case 7.—Farmer. The hand was caught in the tackle of some hay-hoisting gearing and an elongated piece of skin torn from the back of the hand. The wound was cleansed of dirt, grease and blood, and the entire hand and forearm were made as aseptic as possible. A flap was dissected from the forearm with the distal end left attached; this flap was twisted upon itself and sutured in place, filling the defect on the hand; the defect on the forearm was closed, excepting the lower third, where the flap was still attached. The whole was dressed as was the preceding case.

In three or four days, the transplanted flap, or graft, having gained an attachment, the connecting part of the flap was cut and the two ends were sutured in place, one on the dorsum, the other on the forearm, and the latter defect was closed entirely. One week later all stitches were removed.

Case 8.—Plumber. A pot of molten solder was spilled over the back of the hand, and the burn was such that it was plainly seen that skin grafting was absolutely essential to a successful outcome. The wound was given the usual antiseptic and vulnerary treatment for burns until reaction had subsided, when the wound surface was thoroughly cleansed with bichloride solution and hydrogen peroxide and made ready to receive a skin graft.

A flap of sufficient size was now loosened up from the abdomen, leaving both ends attached, the cleansed hand was slipped under this flap far enough to allow the wound to be well covered and the flap sutured in place. The arm and hand were then fixed firmly in place by means of plaster-paris dressings, to prevent any accident or other tearing away of the sutured parts. On the tenth day the two ends of the flap were cut loose and the several free edges sutured in their respective places. The abdominal defect was closed by loosening up the sub-

cutaneous tissues and approximating the edges.

Case 9. Frizzer machine operator. In working on a piece of wood, his hand slipped in some way and the palmar skin was torn away in shreds so finely raveled that it was impossible to utilize any part of it in repairing the injury. The lacerated surface was smoothed out and prepared for grafting. A flap of suitable size and shape was dissected from the outer aspect of the thigh, with one edge left attached, and reflected so as to bring its raw surface in contact with the wound surface. It was then sutured in place and a pad of iodoform gauze was fastened over the graft, so as to force it to conform to the concavity of the palm and secure good contact at all points. The arm and hand were then securely fastened to the side by means of plaster-paris bandages. On the tenth day the attachment of the flap to the thigh was severed, the ends were sutured in place, and the thigh defect closed by loosening up the subcutaneous para-trauma and approximating the edges.

Egg Membrane for Grafting

The grafting with egg membrane has acted well in some instances where there was nothing to be feared from cicatricial contractions. After the wound surface has been prepared, the cleansed raw, absolutely fresh egg is broken open and the shell emptied.

The membrane is carefully peeled out of each half-shell, cut into narrow strips, to overcome the convexity, and laid, inner side down, upon the granulating surface; over these are laid strips of rubber tissue which have been dipped in a mixture of equal parts of balsam of Peru and castor oil, and the whole covered with the usual protective and supporting dressings.

In several cases skin from the belly of the bullfrog has been successfully grafted, although, as a rule, heteroplastic grafts are ineffectual.

Paraffin Protective Film

A paraffin film, which forms a cheap and satisfactory protective in cases of skin grafting, is prepared as follows: Distilled water is boiled in a shallow and wide sterile vessel,

an enameled pie-pan being excellent for this purpose; a small piece of 113° to 116° paraffin is dropped into the water and boiled for twenty minutes; then the vessel is removed from the fire, covered and placed to one side to cool. The paraffin will be found as a thin film covering the water. If desired, a reasonable amount of iodoform or other similar antiseptic can be incorporated in the film by sprinkling the substance over the surface of the paraffin while still molten.

[The thickness of the film will be determined by the weight of paraffin relative to the vessel's diameter, which must be determined by experiment.—Ed.]

Drainage holes can be made in the film by perforating it with a hot aseptic needle. These films may be kept indefinitely by packing them away between sheets of aseptic filter or blotting paper kept moist with an aqueous antiseptic solution and pressed together, to exclude the air.

When desired for use, one of these paraffin films is laid upon a lukewarm aseptic solution (Thiersch's or normal saline), which renders it soft and pliable. It is handled with cold sterile instruments only, and after being cut into shape is laid upon the wound with the water-side down.

Paraffin Netting

Paraffin netting is an improvement upon the paraffin film and which was devised by me some years ago and which is now used almost entirely in my skin-grafting operations.

Silk netting with a mesh of about 1-4 inch (no larger, but not smaller than 1-8 inch), is boiled in plain water for half an hour to remove the starch, gum or other stiffening substance; then rinsed in plain sterile water; next boiled in 1:5000 mercuric-cyanide solution for half an hour; dried in the oven for about five minutes at a not too high temperature; and finally saturated with the paraffin solution and dried in the open air. During all this preparation the netting is kept spread upon and fastened to wire frames about 6 inches square.

The paraffin solution used is made by dissolving sterilized or boiled pure paraffin in redistilled absolutely clean gasoline. The solution can be medicated by adding iodo-

form, iodine crystals, or any other suitable antiseptic soluble in gasolin.

This paraffin solution rapidly permeates the substance of the netting, and when the gasolin evaporates it leaves a soft, flexible, nonabsorbent, nonadhering, antiseptic retention dressing, through which wound secretions readily pass, over which gauze, cotton or other absorbent dressings can be applied and removed without fear of their

pulling off the partially adherent grafts, and which is sufficiently open-meshed to permit of free inspection of the wound surface. Several pieces of netting may be prepared at one time and can be preserved for future use as described for the paraffin films. Immediately prior to being applied to the normal surface the netting may be washed in sterile normal salt solution.¹

(To be continued)

The Nez Percés Indians

By CHARLES STUART MOODY, M. D., Sandpoint, Idaho

EDITORIAL NOTE.—Dr. Moody's articles grow in interest. While they are not strictly "medical," yet they contain much matter of special interest to physicians, and as revealing the little-known home life of the Indian they give us light on medico-sociologic phases of the "Indian question" which are of the utmost importance. Not only our physician-readers, but their wives as well, enjoy Dr. Moody's "story." It will be continued for some time to come.

IV

Friendship Ceases. War Begins

A MOST dramatic series of events severed the bond of amity cemented between the Nez Percés and the whites by Lewis and Clark and brought about, as a culmination, the Nez Percés War, a tiny little struggle, but one that served to show of what metal these people were made.

Could we enter into an extended study of the causes for the war, it would prove a valuable means of understanding many things about Indian character. Space forbids more than a passing mention of even the salient points, such as actually brought about the feud and are illustrative of Indian methods of reasoning.

The Nez Percés Were the Paleface's Friend

As has been previously stated, the Nez Percés always held the friendship of the whites at its highest worth. They looked upon the paleface as a natural ally, and with characteristic Indian fidelity sought to continue the ties that bound the two races together. It can, then, be readily understood that the Indians suffered many indignities at the hands of the whites before appealing to the stern arbitrament of arms to adjust their wrongs.

To the westward bound emigrants, in the early period, the middle of the western frontier settlement, the country of the Flathead, Nez Percés and Cœur d'Alene Indians, was a blessed oasis in the otherwise boundless desert of Indian hostilities. From the time the heavily laden ox-wagons crossed the Platte until they entered the Flathead and Nez Percés country they were surrounded by hostile bands of redskins. Eternal vigilance was the price of life while crossing through the Cheyenne, Sioux, Arapahoe and Blackfoot country.

When the pilgrims crossed the Rocky Mountains and entered the fertile valley of the Bitter Root or that of the Kootenai River they felt safe—they were at last among friends.

Guards were no longer necessary, the travelers could lie down in peace at night and sleep, nor fear to be aroused by the war-whoop of the savage. They could turn their tired stock on the range to graze, well assured that in the morning they would not be gone. More, hunger often stared them in the face, and the Indian hand was always stretched forth with such as he had to give. Often it was but little, but that little was given freely, even though the donor himself went hungry.

How was all this friendship and trust on the part of the Indians requited? It is a long, sad story, one that is calculated to make the humanitarian blush for his country.

The trouble all began in the white man's disregard of the rights of the Indian. We have ever been prone to think, "Oh, he's nothing but an Indian, therefore not entitled to consideration." Anglo-Saxon arrogance has always pictured the white man as the especially favored of the Almighty and invested by him with peculiar rights and privileges, among which stands preeminent the right to appropriate the property of others without consideration or recompense.

Among all the tribes of Indians property rights were held inviolable. Each tribe or nation held title to a certain territory, and every other tribe respected that right. Invasion of an enemy's territory for the purpose of land conquest was unknown. The Indians often engaged in wars, but these wars never took the character of conquest. Surrounding the land of each Indian tribe was a strip of territory that was strictly neutral ground, where members of the different tribes could meet in perfect peace, no matter how hostile they might be upon their own territories. This neutral land gave rise to the belief among the white people that the Indians did not have any fixed idea as to the boundaries of their possessions.

We will now return to the Nez Percés and endeavor to tell as briefly as possible the salient points in the contention that arose between them and the federal government over the right to a certain tract of land.

Something About the Indian Lands

At the time of the visit of Lewis and Clark the Nez Percés occupied a vast territory in the drainage basin of the Kooskia, Snake and Salmon rivers. The explorers touched only a small portion of this region, but their report makes it appear that they explored practically all of it. The land drained by the Salmon, Imnaha and Wallowa rivers was never reached by the exploring party and the inhabitants of these sections were not considered in the estimate of the Nez Percés (*Chopunnish*, in their own language) people as given in the journals of the expedition. Several powerful tribes, including the one

of the head hereditary chief, occupied this country, and it was as much a part of the Nez Percés land possessions as that bordering the Kooskia and its tributaries.

For many years after the advent of the first whites no attempt was made to secure any Indian territory. The western country was involved in the meshes of international controversy. Great Britain claimed all the country drained by the Columbia, basing her claim upon the discoveries of Vancouver, while we laid claim to the same territory, urging the voyage of Gray as the basis of our contention. The matter was finally amicably adjusted by both nations accepting less than they originally claimed. The 49th parallel of north latitude was adopted as the dividing line, and so the matter that had threatened a third war with England passed into history. That is, it became history so far as Great Britain and the United States were concerned.

However, to the Indian citizens of the country now owned by the United States, the question was still a living, vital issue, one destined to work them a great deal of hardship in the few years next to follow the consummation of the Webster-Ashburton treaty.

Invasion of the White Man

The few returning missionaries, fur traders and explorers carried to the eastern states the news of the wonderful fertility of soil, salubrity of climate, and manifold natural advantages of the western coast. The restless Anglo-Saxon spirit caught fire at the glowing accounts, and very soon wagon trains were headed toward the Pacific in quest of new homes and fresh wealth.

The discovery of gold in California led to its discovery also in Oregon, and in the few years succeeding 1849 the Oregon country became overrun with prospectors who, failing to find wealth of yellow metal, turned their attention to the riches dormant in the dark loam of the new land. They "squatted" on whatever piece of land best suited their fancy, irrespective of the wishes of the original owners. Small settlements sprang up in the rich valleys and the red man saw his best garden-spots ruthlessly torn from him. Many of the western-bound emigrants entered the "Oregon Country"

over the old "Oregon trail" which led through southern Idaho and across eastern Oregon, through the Imanha and Wallowa, the ancestral seat of the Nez Percés nation. It was a wonderfully fertile country, this land of the Wallowa, a rich black soil, well watered, and having a delightful climate.

It was but natural for the dominating white man to wish to possess such a land. To wish was to attempt. In a few years we find the heavily laden wagon turning aside from the onswEEPing tide and coming to a halt beside the cold springs of the Indian. We find the white man building himself a rude cabin and fencing a few acres of land, enclosing the spring. We find him loosing his herds of kine on the green hillsides to consume the grass. All of these things the Indians viewed with disfavor, but with characteristic Indian reticence they said nothing. They did not realize at first that they were being gradually pushed to the wall.

"Old Joseph" Resents Further Encroachment

"Old Joseph," then head chief of the Nez Percés, was a shrewd, calculating old savage. He soon grew to view the influx of white population with considerable alarm. He foresaw the effect upon his neighbors to the west, but, with the usual strange fatalism of an Indian, did not believe his own country would be invaded. The missionary settlement at Lapwai did not concern him; if the Kooskia Indians chose to harbor the white people, that was no business of his. He did not accept the new teaching about the Nazarene, nor did he encourage his sons, Joseph and Ollicut, to do so.

In his mountain valley, beside the lovely Wallowa Lake, the old chief dwelt with his people, nor dreamed that a time was rapidly approaching when he would have to battle for his ancestral land. That time came on apace. The Grande Ronde to the east settled up, the entire country to the west, along the Columbia, became populated, and still other land-hungry people poured into the red man's country—and so the second act of the drama opened.

The Indians bore the encroachment for several years, until the range became nearly all fenced, and what was not, was cropped close by immense herds of sheep, cattle and

horses from the Grande Ronde. The Indian ponies suffered, more especially when it is understood that an Indian makes no provision for wintering his animals, leaving them to forage on the hills. The water was being appropriated by the white settlers for irrigating purposes, and so, the Indian stock, in order to slake their thirst, were often compelled to break down fences. This incensed the whites and they retaliated by shooting the animals.

Relations Growing More Strained

Thus matters ran along for several years, the relations growing all the time more strained.

At last "Old Joseph" called on the Indian Superintendent to remove the white people from his land. However, as the superintendent had, unluckily, to look after the vast region bounded on the east by the Rocky Mountains and on the west by the Pacific Ocean it was several years before he got around to attend the Indian's wants. He finally came, talked the matter over with "Old Joseph," and then promised that the white people would be caused to vacate the country. He likewise talked to the white settlers and—well, they did not vacate.

With an Indian, as I before stated, his word is as good as his bond, and they were fatuous enough to believe that the white man also had the same regard for his pledge. The Indians waited some more years for justice, but justice came not. The country still kept filling up.

The Treaty of 1855

Then came the treaty of 1855. The eastern-Oregon, northern-Idaho and central-Washington tribes were asked to convene in the Walla Walla Valley, at Camp Stevens, in June for the purpose of adjusting their differences with the government. That was what appeared on the surface. In reality the meeting was held for the sole and only purpose of hoaxing the Indians out of several large and desirable slices of their territory. With the provisions of the several treaties entered into with the other tribes we have nothing to do, only that made with the Nez Percés concerning us here.

"Old Joseph," with his followers, came from the Wallowa. The "Lawyer" and his

people came from the Kooskia. With this latter Indian came the Rev. Spaulding, to assist in the deliberations and secure to the Government such concessions as he deemed best. The reverend gentleman made himself so officious that "Old Joseph" finally became angry and pointedly told him that a missionary's business was with souls, not lands, and that he must quit interfering with matters that were none of his concern.

The Indians Refuse to Yield Possession

The Kooskia Indians, being largely Christian, were anxious for the Wallowa lands to be ceded to the Government so that their brethren would be compelled to remove over to the Kooskia. They had a stormy session. The Wallowa Indians refused to dispose of their homes at all, but finally decided to cede a vast region in the Bitter Root Mountains that was unoccupied and used by them only as a hunting ground. Even at that, "Old Joseph" refused to sign the treaty. While it did not interfere with his home, in fact secured it to him, the old warrior insisted that if he parted with any portion of his domain, it would be only a short time until he would be called upon to yield up another part. You see, "Old Joseph" was beginning to discern the mailed gauntlet of greed beneath the kid glove of friendship.

It seems the old man had an almost prophetic intuition of what was to come, for a few years later, when he came to die, he called Young Joseph to him and exacted from the coming leader a promise that the land of the Wallowa should never be given up.

For years the treaty of 1855 was not ratified. The Indians complained of the lack of faith on the part of the Government in not causing the whites to vacate the country. As a matter of fact, the Indian authorities were either powerless or did not care to act, and kept putting the Wallowas off with promises that never were intended to be fulfilled.

For several years prior to the death of "Old Joseph" the reins of tribal government were given into the hands of his eldest son, Young Joseph, or in Nez Percés tongue, Hali-hali-keen. Young Joseph was the most sagacious Indian I have ever known, and a man of more force of character than I

ever witnessed in a savage. He was a natural leader, a skilled diplomat, honest as the light of day, and filled with a great patriotic ardor.

The Government had had a covetous eye upon the Wallowa country for a number of years. According to all accounts, the Indians possessed too much land and ought to have some of it taken away from them; but being stubborn, they persistently refused to dispose of it for a few blankets and a few rations of moldy flour and prehistoric beef. These obstinate and purblind creatures insisted that if they were let alone they could subsist very comfortably on the natural products of their country. All the pleadings of self-interested missionaries or the cajolery of government officials failed to budge them from their position.

Something had to be done to get those lands. Oregon had been admitted into the Union and her citizens were in possession of the ballot. It was to the interest of the politicians to placate them rather than those ignorant savages who were not invested with the rights of citizenship.

Young Joseph and His Indians Are Tricked

A meeting was called, in 1863, at Lapwai for the purpose of purchasing the Wallowa lands. The Wallowa Indians, under Young Joseph, came and found the council tent packed with Indians from the Kooskia, brought there for a purpose. The session opened in due form. The treaty commissioners made the Indians a proposition to purchase the land, which Young Joseph declined to accept. The Kooskia Christian Indians then took a hand, and after several days of debate the matter was put to a vote and the land sold. The Wallowas returned home, their hearts rankling with hate. They resolved to retain possession of their homes even at the expense of bloodshed.

It will be understood that the Indians who voted to dispose of the lands were in no way concerned in the same. They lived on the Kooskia, many miles from the territory under discussion, and their vote was controlled entirely by their religious teachers. It was a smooth political scheme, one that would do credit to Tammany in her palmiest days.

The Government very promptly called upon the Wallowa Indians to vacate their homes; they, however, very promptly declined to do so. They refused to accept any portion of the purchase price of the lands in question and held that, inasmuch as they had refused to cede the lands, they were not obligated to recognize the cession made by their brethren of the Kooskia.

It may be well enough to pause here long enough to explain that the Indians of the Kooskia were perfectly honest in their desire to have their brother tribesmen of the Wallowa with them. They thought it would be better for all elements of the tribe to be united. Several miles intervened between the two principal divisions and, inasmuch as Indians are gregarious creatures, the Kooskia Indians were solicitous for the companionship of their fellows. That they permitted themselves to be imposed upon by interested white men is nothing to their discredit. History teems with instances of where designing persons have influenced the voices of men higher in the scale of enlightenment than the Nez Percés Indians.

In 1873 (June 10) President Grant ceded the Wallowa Valley to the Indians but neglected to order the white settlers to vacate. The latter naturally raised a howl, and so a year later the President took the land away again from the Indians. This raised a protest from the natives and provoked this speech from Chief Young Joseph. "Am I child that you should give me a toy today and tomorrow take it away again? Why do you not know your own mind? If you intend to take my land, take it and keep it; not take it and then give it back again. I am a man, treat me as a man, not as a child."

The Government Finally Provokes Hostilities

Evidently the Indian Bureau concluded to take the Chief's advice, for in the spring of 1877 it issued an order to the Indian

Agent at Lapwai to set about removing the Wallawas at once. The Agent communicated with General Howard, then Department Commander of the Division of the Pacific, asking him to hold the military ready to assist in effecting the removal, for he guessed that the Indians would not comply without a struggle. At the same time the Agent sent several friendly Indians over to the Wallowa to plead with Joseph and his people to come on over and choose homes on the Kooskia. The errand was fruitless. Joseph flatly declined to move and sent word to the authorities to come with their troops and take him, as the General had threatened to do the year previous at a council held in Lapwai.

General Howard, upon receipt of the telegram from the Agent at Lapwai, hastened with all speed from his headquarters in Portland, Oregon, to Lapwai. He called a meeting of the Wallowa and other interested Indians to be held there. This meeting convened in May (1877), with all the so-called "nontreaty" Indians in attendance. There were present Joseph and his brother Ollicut. Hush-hush came from the Asotin, White Bird and Too-hul-hul-sote from the Salmon River, and Looking-Glass from the forks of the Kooskia—though the latter was not concerned in the removal order.

The "talk" was a very stormy one and resulted finally in Howard arresting Too-hul-hul-sote and placing him in prison. This old savage was the head "*tu-at*," or medicine-man, of the "nontreaties," and his arrest was a terrible blow to Indian dignity. No sooner had old Too-hul-hul-sote been lead away, than Joseph arose and, followed by his cohorts, sulkily walked out of the council-tent.

War was now inevitable. The blind obstinacy of one man had made it so. Of all the insane acts of a sane man the arrest of the high priest of the savage religion was perhaps the most insane.

(To be continued)



The Redbank Physicians' Protective Association

A Practical Plan for the Economic Betterment of the Medical Profession

By C. E. SAYERS, M. D., Hawthorn, Pennsylvania

II.

HAVING formulated a plan which to me seemed worthy of consideration and trial, I decided to present it to other physicians for their approval or disapproval.

The Preliminary Steps

It was during the month of February, 1909, when after an early morning consultation with my worthy colleague, Dr. C. V. Hepler, I invited him to my office for a little private talk. We discussed the question of fee-bill, collection of bad accounts, deadbeating, etc., and I found that he, too, was very much dissatisfied with the existing conditions. Taking him into my confidence, I told him of the better plan, explained its advantages, and asked his assistance in interesting other physicians. He agreed to do this, but seemed somewhat in doubt as to results.

We then took up the question with Dr. F. K. Booth of Fairmount City, a little mining town three miles south. He also expressed his disgust with the prevalent conditions and said he was ready and willing to drop the oldtime ways for even a hope of something better. We spoke to others, and thereupon called a meeting for February 23. This was the first R. P. P. A. meeting. It was held in my private office with but three present, viz., Drs. Booth, Hepler, and myself.

We talked over our grievances and the proposed plans for relief. We discussed the attitude of other physicians and various plans for reaching them, made note of a few of the worst deadbeats, and adjourned to meet one week later. In the meantime the other men were interviewed, the question was discussed with them, and an invitation extended to join with us. The second meeting was held in the office of Dr. Booth,

with but the same three in attendance again.

The reports, all in all, were encouraging and we could see that we were gaining ground. Matters were getting interesting now. At the next meeting five were in attendance; and two weeks later we had eight in all.

A Permanent Organization Is Effected

At this meeting we adopted a Constitution and By Laws, effected a permanent organization, and elected President, Vice president, Secretary, Assistant Secretary, Treasurer, and three Judiciary Committee men. We were now ready to begin active work in our chosen field of action with the following practising physicians as charter members: J. A. Wick, A. J. Hepler, J. M. F. Brown, E. K. Shumaker, P. W. Shumaker, of New Bethlehem; F. K. Booth of Fairmount City; and C. V. Hepler and the writer, of Hawthorn.

This little band of physicians, forming a nucleus for a great and growing organization, worked along earnestly but cautiously, testing and perfecting the plans which have wrought so great a revolution in the practice of medicine in the Redbank Valley, and thus put themselves upon a firm and broad basis for a grand and noble work.

The Question of Legality Settled

After several months of successful operation the question of legality came up. We had heard of several similar organizations that were said to have been abandoned because of their supposed illegality. The time had come that this question with us be settled once and for all. For this purpose, the writer was authorized to employ legal counsel and lay the whole matter before him. Accordingly, Don Carlos Corbett of Clarion, one of the ablest lawyers of western

Pennsylvania, was engaged, who gave the scheme a thorough examination and, in his final opinion rendered, he recommended but one single change. This change we made without, in any way, lessening the effectiveness of the plan as a whole.

The settling of this matter eliminated all questions of conspiracy and illegal combination, and today, although we stand as an oath-bound secret organization, yet we feel perfectly safe under the present laws of our commonwealth and nation.

Qualifications Essential to Membership

No person can become a member of this Association who is not a legally qualified and active practitioner of medicine, or when the ballot shall contain two or more negative votes, or who shall refuse to sign the Constitution and By-Laws, and to take the required oath to support, obey and defend the same.

Division Into Local Branches

For practical purposes, the membership of this Association is divided into local branches, named according to locality, and numbered according to relative time of admission.

On the first Monday in January of each year, each local branch chooses its own officers, consisting of a President, a secretary and Assistant Secretary. When elected, each local President becomes a Vice-president, and each local Secretary an Assistant Secretary of the general association.

Dealing with Delinquent Debtors

Two lists of debtors are prepared and kept by the Association. The first is known as the delinquent list, which is made up, revised and completed at each of the various local meetings, and upon which each member may place a limited number of his delinquent debtors for the inspection, information, benefit, and protection of the other members of the Association.

The second is known as the precautionary list, and upon it are placed the names of such undesirably slow-paying, dishonest, creditor-avoiding, shirking, and dead-beating members of the laity as the Association might be the better off for knowing.

Each local Secretary reports weekly all additions and changes made on the lists in the local meeting, to the general Secretary, who in turn publishes and mails to each member a bulletin showing such changes.

This system of reporting delinquents and our manner of handling those listed as such constitutes one of the effective features of our Association's work, and serves to us a purpose similar to that of Dun and Bradstreet in the commercial world. But our results are better because there is a closer bond of union between the members of our Association than between ordinary business men.

Work of the Meetings

We hold two kinds of meetings, local and general. The local meetings are held weekly, usually on Monday evening, by the various local branches. At these meetings the lists are made up, revised and completed, collections, deadbeats and local ethics are discussed. In fact, we come together as members of a common brotherhood to take up, talk over, and dispose of those little unethical entanglements which have always, heretofore, kept up the spirit of rivalry and antagonism so delightful to certain classes of the laity. Before, if a man had a little grievance, he often carried it in his heart till it grew to such wonderful dimensions that it took half a lifetime to forget it. Now, he talks it over in a fraternal way in these meetings, things are made right, and soon all is forgotten.

On the first Tuesday in the months of January, April, July and October all these local branches come together in a general meeting for the consideration of plans and topics along this special line of work. No medical nor surgical subjects are mentioned. For example, at the January meeting papers were read on these subjects: "That Old Book of Mine" (a retrospective view of the ledger of a hard-working physician, with special reference to old and outlawed accounts contained therein, and what they represent in actual expense and personal sacrifice to him), "Ethics of Harmony," "An Obligation," "Whom Shall I Serve?" (a comparison of other professions with the medical), "The Past, the Present, and the Future," "Better Prices for Physicians,"

"Protection that Protects," "That Silent Code."

We hope to give, at some future time, to the readers of this journal the benefit of at least three or four papers selected from this list.

The Plan Works Well

To say that our plan is effective is putting it very mild. No one can fully appreciate

this until he becomes a member and gets acquainted with the details of the work. This effectiveness owes its strength, in a large measure, to the required oath of admission, to the secrecy of the meetings, to the frequency of the local meetings, and to the strict but voluntary adherence to "The Silent Code," of which we hope to tell you more later.

(To be continued)

The Nature and Treatment of Varicocele

Its Surgical Treatment Under Local Anesthesia

By **BENJAMIN H. BREAKSTONE, B. S., M. D., Chicago, Illinois**

Professor of Principles of Surgery and Clinical Surgery, Bennett Medical College;
Consulting Surgeon, Mary Thompson Hospital for Women; Attending Surgeon, Jefferson Park Hospital

EDITORIAL NOTE.—In his article last month Professor Breakstone described the scrotal operation for the cure of varicocele. We suggest that this article be read before perusing the one which follows, which deals with the suprapubic operation. Next month the subject of "Every-Day Surgery" will be continued.

II.

IT is preferable, in a great many cases, to do a suprapubic operation for varicocele. This operation has many advantages over the scrotal operation, inasmuch as it

is performed in a field which can be aseptized much more readily than the scrotum and can be kept aseptic after the operation.

The field of operation is to be prepared according to the prescribed rules for securing

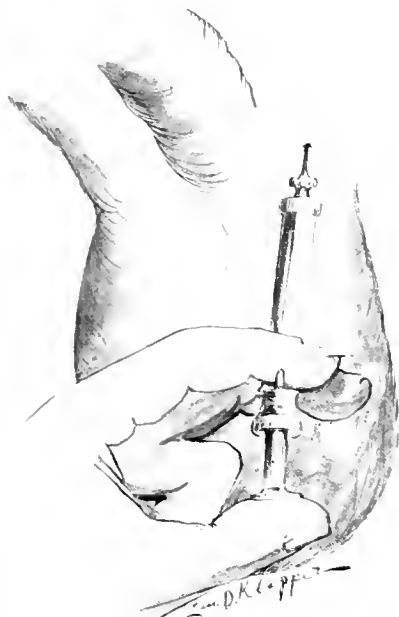


Fig. 1. Inject anesthetizing solution along line of incision.



Fig. 2. The cord is exposed and the veins separated from the vas deferens.

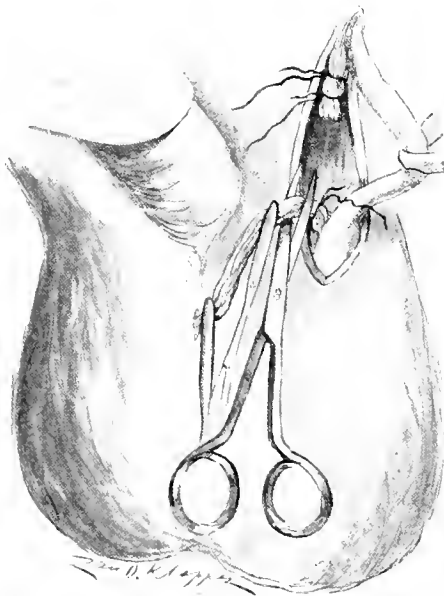


Fig. 3. A sufficient section of the veins is removed.

asepsis. Then the anesthetizing solution is injected along the line of incision, which extends upwards from the pubic spine for two to two and one-half inches, as shown in Figure 1.

While waiting for the solution to take effect, the instruments are prepared. These consist of a knife, scissors and half a dozen artery forceps and two pair of tissue forceps, needles, catgut and horsehair or silkworm gut.



Fig. 4. The veins are brought together and sutured.

The incision having been made through the skin and superficial fascia down to the external abdominal ring, the cord is exposed and the veins separated from the vas deferens, as shown in Figure 2. The vas deferens can easily be recognized, as on palpation it feels hard and round, and is of uniform caliber throughout the field exposed. The vas deferens should be kept away from the plexus veins by a blunt hook or a loop of gauze. (Figure 2).

Great care should be exercised to avoid injuring the vas deferens, as already stated in the previous article. The veins having been separated they are then ligated, the upper part first and then the lower part, and a sufficient section of these veins removed, as shown in Figure 3. It will be seen that



Fig. 5. The external wound is now closed.

the testicle is exposed at the lower end of the wound. The veins are then brought together, as shown in Figure 4, and the wound sutured in the usual way (Figure 5).

If the operation has been performed under strict asepsis, the wound may be sealed with collodion and a dry dressing applied.

It is much safer to do the suprapubic than the scrotal operation, since infections are not so liable to occur. Moreover, the veins are ligated higher up, where there are less branches, and therefore hematoma is less likely to follow.

The after-treatment consists in keeping the wound clean and dry and dressing it twice a week. At the end of ten days or two weeks the patient is discharged.

Laboratory Help in Tuberculosis

Facts with Which Every Physician Should be Familiar

By J. FAVIL BIEHN, M. D., Chicago, Illinois

EDITORIAL NOTE.—Medical men are just waking up to the fact that the laboratory has something more than a purely "scientific" interest to them. The information obtained from it (and in no other way) again and again provides the key to successful treatment. For this reason particularly, Dr. Biehn's paper should be read closely and its suggestions made use of in every case of tuberculosis.

IN tuberculosis, especially, we must constantly bear in mind to treat the patient and not the disease. We, therefore, have constant need to utilize all the resources of science, and the laboratory, here as elsewhere, can give us assistance that can be acquired in no other way.

The demonstration of the tubercle bacillus as the cause of tuberculosis and the simple practical method of determining its presence by the examination of the sputum have led to the establishment of this method as a routine procedure by all progressive practitioners.

The tendency of the day is to examine the sputum as soon as one finds a patient presenting any of the clinical signs or symptoms of pulmonary tuberculosis. The finding of tubercle bacilli in the sputum is, necessarily, positive evidence of the disease, but, unfortunately, negative findings are of comparatively little value.

Oftentimes tubercle bacilli are demonstrable when the physical signs of the disease are ambiguous, but at other times, even in advanced cases, they cannot be demonstrated, either because there is no ulcerating focus, as in miliary tuberculosis, or because the cheesy areas are not in communication with the bronchioles.

Brown's Conclusions as to the Value of Laboratory Findings

Brown, in *The Journal of the American Medical Association* (Vol. XL, 1903, page 541), sums up the value of sputum examination as follows:

1. Many of the tubercle bacilli may not be stained at all.
2. Old foci may give off very few and young foci no bacilli.

3. By the occlusion of a bronchus, the contents of a focus may be shut off entirely for a time, and so, when expelled, the sputa may contain a large number of tubercle bacilli.

4. The organisms may be present one day and not again for months.

5. The organisms may be abundant in one part of the sputum and none may be found in other parts.

6. Some patients with fatal tuberculosis (caseous pneumonia or acute miliary tuberculosis) may have no bacilli in the sputum, while in other cases the organisms are present, even before physical signs obtain.

7. In severe cases, with bronchitis, the secretion of the bronchi will dilute the sputa and give the appearance of a reduction in the number of organisms. From this it may readily be seen that too much reliance can not be placed upon the number of the bacilli in the sputum. This is usually, however, in direct ratio to the severity of the disease.

Additional Diagnostic Factors

The germs of secondary infection, that is, the streptococci, pneumococci, micrococci catarrhalis, and influenza bacilli, must be considered, as they usually are the immediate cause of death, by septicemia.

The demonstration of elastic fibers in the sputum is also of importance, as they prove a disintegration of tissue by the tuberculous process, and are present in from 70 to 90 percent of all cases. They are not pathognomonic of the disease, however, as they are also found in pulmonary gangrene, abscess and infarcts of the lung.

Aside from the demonstration of tubercle bacilli in the sputum, there are numerous additional facts regarding the condition of

the patient, that are highly essential to successful treatment, and that can only be determined by a laboratory demonstration.

Tuberculosis is a general disease and affects, directly or indirectly, the entire body. We therefore expect and find disorders of metabolism, etc. These also must be taken into consideration.

Examination of the Urine

Although the examination of the urine will not make a diagnosis of tuberculosis, except of a renal involvement, it is of especial value; that is, not the ordinary routine examination, but a complete qualitative and quantitative examination, including physiologic tests.

In general, the urine in this disease is normal at the outset, but soon the disturbed metabolism manifests itself by changes in this, the principal excretory, product. If fever is present, the amount is diminished, the color high and the acidity increased. The acidity particularly is increased during rapid loss of flesh or breaking down of lung-tissue and is accompanied by phosphaturia, principally calcium salts. We normally find 0.2 to 0.3 Grams of calcium per day, but in tuberculosis we find up to 0.47 Gram. This gradually diminishes, however, and may disappear when cachexia supervenes.

Diacetic acid, acetone and increased ammonia excretion indicate a lack of oxygenation, etc., and show us that the blood is less alkaline and therefore possesses a lessened resisting power. This condition is very readily corrected, and with surprising results, by the administration of alkalis.

The total solids are diminished, as is also the urea. The latter varies somewhat, depending upon the appetite, general metabolism and degree of fever. The amount of uric acid is increased, while the sulphates show a slight decrease, as do also the chlorides, especially if diarrhea be present, unless a very large amount of the chlorine element is included in the diet.

Albumin is usually present, often with casts in large numbers, indicating a concomitant glomerulonephritis, which is a very frequent complication. Renal congestion, a constant condition in tuberculosis,

regularly produces a trace of albumin, a few casts and red blood-corpuscles.

Pyuria indicates a tuberculous infection of the kidneys, and the bacilli should be diligently sought for.

In examining the urine for tubercle bacilli, the best results are obtained by examining a catheter specimen. In this way we are enabled to obviate contamination with the smegma bacilli always present on the genitourinary organs.

The demonstration of tubercle bacilli in the urine is at best a very difficult matter, owing to their occurring in clumps and therefore requiring patient search, and in all cases of negative findings an animal experiment should be made.

The finding of tubercle bacilli in the urine does not necessarily indicate a genitourinary tuberculosis. Tubercle bacilli have been found in the urine in cases of miliary tuberculosis and have also been reported in cases of pulmonary tuberculosis, although it is more frequent to find them as evidences of local tuberculosis.

Ehrlich's diazo reaction is of some prognostic importance. Ehrlich claims that if this reaction is present during a considerable period of time, it denotes an early fatal termination.

Examination of the Feces

The usual custom of forced feeding requires, beside a careful examination of the feces for its control, frequent examination of the urine, in order to determine the presence of indican, which indicates intestinal indigestion and putrefaction. The writer has seen many patients succumb rapidly, due undoubtedly to uncontrolled forced feeding. These patients did not digest or assimilate much of the additional food ingested, and as a result putrefaction occurred, producing toxic bodies, the absorption and elimination of which placed an additional burden on the individual, which finally overpowered him.

The examination of the stools for tubercle bacilli is very rarely satisfactory, owing to the enormous number of bacteria present, many of them acid-fast and having peculiar and other staining characteristics of the tubercle bacilli. If, however, we find characteristic organisms on repeated examina-

tion, with clinical symptoms pointing to tuberculosis of the bowel, we are justified in giving a presumptive diagnosis of tuberculosis. We must not lose sight of the fact, however, that the tubercle bacilli may appear in the stools as the result of tuberculous sputum having been swallowed.

The Blood in Tuberculosis

The blood in tuberculosis does not show the changes one would expect. Although, to all appearances, the patient is very anemic, yet, a blood-count will show that there is only a slight reduction in the number of red blood-corpuscles. There is usually a greater reduction, correspondingly, in the amount of hemoglobin present, so that we have a condition of mild chlorosis. A severe anemia is more frequently associated with pulmonary tuberculosis than with any other form, unquestionably due to the extensive hemorrhages that occur. We find, however, that the regeneration of the blood is rapid, even after severe hemorrhage.

We always find a leukopenia, that is, a decrease in the number of white blood-corpuscles, unless there is a marked secondary infection. Then the leukocytes usually are slightly increased. There is always a relative increase in the number of lymphocytes, or small round cells. In a pure tuberculous infection these predominate also in the sputum. With a secondary infection of a marked type we have a predominance of the polymorphonuclear leukocytes.

In tuberculosis of the kidneys, pus cells appear early, and usually are present in considerable numbers. The pyuria is usually constant and associated with hematuria. The pus corpuscles are largely of the mononuclear type, not the ordinary polynuclears.

The Spinal Fluid in Meningitis

In tuberculous meningitis, the cerebrospinal fluid usually is clear, but may be slightly opalescent. Generally there are present an enormous number of cellular elements, mostly of the mononuclear type. Occasionally a few red blood-corpuscles may be seen. If we stain, we are practically sure of getting positive results in at least seventy-five percent of the cases. Failing to find tubercle bacilli in the presence of a lympho-

cytosis, an animal inoculation should be made, or the patient subjected to the tuberculin test.

The Digestion

The necessity for hyperalimentation in tuberculosis renders constant watchfulness of the digestion necessary; the capacity of the stomach to digest must be ascertained with great certainty.

There is no doubt that a careful analysis of the stomach-contents in tuberculosis, at least in the early stages of the disease, will show that the anorexia complained of by these patients is anorexia nervosa, and that the stomach produces a normal juice. However, it is absolutely essential, in order that one may scientifically and intelligently treat the case, to know exactly the condition of the digestive organs, just as it is essential to know the exact condition of all the excretory organs, so as to make certain that elimination is satisfactory.

Success in Proportion to Exactitude

If the physician pays attention to these generalities, and thoroughly knows the condition of his patient, there is no question but that he will be able to obtain better and more satisfactory results in the treatment of this disease.

The marked success of some practitioners, in the large hospitals or sanitariums, in the treatment of this disease is unquestionably due to the fact that they ascertain the exact status of the patient. They note and correct any digressions from the normal, and in this way they are able to raise the general standard of his resistance, just as the sending of the patient to a higher and dryer climate tends to eliminate a secondary infection, thereby allowing all of the patient's reconstructive forces to combat the tuberculous infection. Under these conditions, the malady is much more likely to be overcome, or at least held in abeyance.

In conclusion, I wish to state that to treat intelligently and successfully a patient who has tuberculosis (or any other disease, for that matter), the laboratory findings, no less than the clinical symptoms, must be known and carefully considered in order to obtain a complete clinical picture.

Only a few of our patients actually die of tuberculosis; they do die of some complication or intercurrent pathologic condition that usually can be foreseen, and often prevented, by a proper and complete analysis.

Realizing, as everyone must, the importance of clinical findings, still, I know that these fall far short of the whole symptom-

complex, a knowledge of which is so necessary to attain satisfactory results. Unfortunately, too many of us are one-sided—we are either clinicians or laboratory workers.

To succeed, we must utilize all the resources at our command, combining both the clinical and laboratory facts, as they are equally essential.

What Has Become of the Family Doctor?

With Some Remarks About the Specialist

By W. H. PETERS, M. D., Providence, Rhode Island

IT is a rare occurrence nowadays for one to meet with a physician of the old school, the type of man who cured all our ills instead of parceling them out to different specialists. The good old conservative family doctor, God bless him, is disappearing; even in remote towns and villages, he is becoming a rarity. At the village store we've heard him discussing the topics of the day, giving excellent advice on how to harvest grain, cure a sick horse or how to cure a man with salt rheum. Occasionally we see pictures of him in magazines, driving over country roads in a one-horse shay, or with his horse and saddle bags, on his way to give some poor sufferer relief.

Haven't you often heard your mother or your grandmother tell of the times when you were a little boy and how the good old doctor cured you of the measles with hot thornwort tea and epsom salt? And by the way, just as many cases got well then as do now, even if we do have more up-to-date medicines, and trained nurses.

All of this is changed now. We have doctors running around in high-powered automobiles to see their patients, a different doctor for almost every different disease. There may be a few of the good old family doctors left, the kind of doctors mother had when she was a girl, but this really comforting and useful genius seems to be passing into oblivion. Certainly the passing of the family doctor is a distinct misfortune to the community.

An experience some time ago in one of our large cities comes here to mind: One Mr. Smith (let us say) and an elderly gentleman, after a generous dinner went to the opera. During the performance the elderly gentleman became ill. Smith at once got his friend into a cab and drove in haste to a doctor's office, rang the bell, and was admitted with his sick friend.

"Hum—," observed the doctor after a superficial examination, "this gentleman has an embolus of the brain. I am sorry I cannot help him, as my specialty is disease of the joints. You had best go up the street where there is another doctor."

Smith bundled his poor suffering friend back into the cab, drove up street to where he again saw a doctor's sign and was again admitted.

"Hum—," said this physician, "he certainly has an embolus, but my peculiar field is stomach diseases. You had better try Brown."

This painful experience was repeated in half a dozen consultation rooms until the happy idea occurred to the last consultant to advise that the patient be taken to the Presbyterian Hospital near by. This was done.

"Yes," said the physician in charge here, "he has an embolus and we can treat him—that is, if he is a Presbyterian."

Finally, by a master stroke of genius, Smith determined upon taking him to his old family physician on a side street, who could cure anything from embolism of the



DR. GEORGE WHEATON CARR

One of the loved family physicians of Providence, R. I. He was kind and careful and his patients all loved him. He died recently.

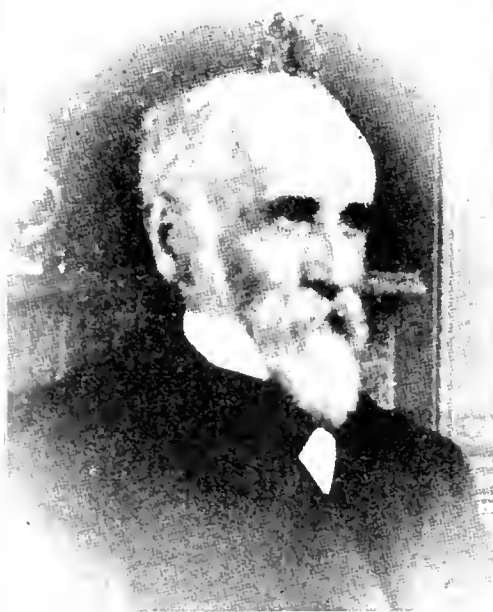
brain down to an ingrowing toe-nail; and by this means did the sufferer secure relief and soon became a well man.

The Evolution of the Specialist

One can of course easily understand the evolution of the specialist in medicine; he is the logical result of the vast advances which have been made in the science and art of medicine and surgery during recent years. Authentic history relates how in Egypt in the time of the Ptolomies there were many specialties in medicine, almost as many (possibly more) as we have today. A list of them is of truly astonishing length. There were men who dealt exclusively with the eye, the ear, the joints, the stomach and so on, and it was not considered good form for the joint-man to poke his speculum into the ear or for the eye-man to inquire about the stomach.

Montaigne (who lived in the time of Shakespeare) relates, with a sort of sardonic

humor, how in his day doctors were constantly inventing new diseases, which of course needed special attention by men especially trained for the work. Montaigne had a grouch on the physicians of his day, mainly for the reason that his later years were tortured by the stone which finally caused his demise. Of course Ambroise Paré, "the famous surgeon, could have relieved him, but surgery hurt in those days, which knew not ether or chloroform or lumbar puncture." So Montaigne, though "very sensible of essential and corporeal pain," was yet not a man of heroic mold and preferred enduring the stone to the knife for its eradication. "The arts," he declared,



DR. JAMES WINCHELL COLEMAN ELY

A graduate of Harvard in 1846. At the time of his death, after sixty years in the general practice of medicine, he was the dean of the profession in Rhode Island.

"that promise to keep our bodies and souls in health, promise a great deal; but withal, there is none that less keep their promise."

The Coming of Lawyer and Doctor

Montaigne cites the case of a small rural community which lived in a very simple and primitive fashion. "This little state had continued from all antiquity in so happy a condition that no neighboring judge was

ever put to the trouble of enquiring into their doings, no advocate ever retained to give them counsel, nor stranger ever called in to compose their differences;" nor did this happy community know what it was to be sick, having no disease, like the oyster, which is either healthy or dead.

But unfortunately for them a lawyer and a doctor came among them. The troubles the lawyer brewed will not here be considered. The physician began first of all to teach them "the names of fevers, rheums and imposthumes, the seat of the heart, liver and intestines, a science until then utterly unknown to them, and instead of garlick, with which they were wont to cure all disease, however painful or extreme, he taught them to take strange mixtures, and began to make a trade, not only of their healths, but of their lives. They swore until then they had never preceived the evening air to be offensive to the head, that to drink when they were hot was hurtful and that the winds of autumn were more unwholesome than those of the spring, that since this use of phisic, they find themselves oppressed with a legion of diseases and they perceive a general decay in their wonted vigor, and their lives are shorter by half."

If one doctor could work all this havoc in a little community, what would have happened had a lot of specialists been let loose. Imagine what would have happened in that rustic community had it had (as with us nowadays) its every physical organ and member parcelled out among a number of specialists. Such is indeed the case with us in our modern twentieth century civilization. As Mr. Dooley remarks, there is "Doctor Ventricle for the heart," and "Doctor Bellows for the lungs," nor would either of them be quite so unethical as to venture upon anything below the diaphragm.

Why Medical Specialism Has Developed

There are several reasons for this up-to-date development in medical specialism. In the first place, almost every human calling is now specialized. Seldom does a watchmaker make a whole watch. One man makes only the main springs, another the faces or cases, and so on. Rarely will you find a shoemaker today to make you a whole

pair of shoes; one now prepares the sole, another the buttonholes, and others different parts. The law is divided up into a lot of specialties, so that plenty of technicalities may be invented for getting around the simplest principles of justice. So is also in medicine, and this on the whole is beneficial for the race.

The thing, however, that we should insist upon is that the specialist should be competent in his own specialty, that his reputation should be based upon a fair amount of preparation. The specialist should be evolved out of the general practitioner. He ought to have based his special career firmly upon a knowledge of the physiology and pathology of the *whole* body. He ought never to lose sight of the fact that his specialty is but a part of an indefinitely complex machine; he ought not, as many do, consider that in some way the human body has grown around the eye, or the ear, or the appendix, or whatever tissue he is most interested in. It is astonishing how narrow many a specialist becomes; while he is treating some special organ the patient may be dying of a disease somewhere else in the body.

Dermatologic Differences

An instance is recalled of a dermatologist of considerable reputation who was a wonder in diagnosing skin troubles but had to consult a hospital interne as to the proper dose of calomel for a baby with the hives. These skin specialists, by the way, have a society which meets once a year. At this annual meeting they add some hundreds of new diseases they discovered since the previous meeting, so that their nomenclature looks like a section torn out of a Greek lexicon. For all that, however, the treatment of skin diseases has not advanced beyond what it was a score of years ago. Anyway, the patient should be consoled, while scratching himself, with the knowledge that he is suffering with a malady that has a new, elegant and many-syllabled name.

Undertrained Specialists

Here another and much graver danger arises—it is that general practitioners, allured by the larger fees which accrue to specialists, determine upon becoming spe-

cialists themselves. To this end they visit the larger cities at some time in the year when the work is slack; the pneumonia season is closed, or the typhoids are all over with, or the summer complaints are not yet on. They really make a vacation of it and take a six-weeks' course on some subject in a postgraduate school. Now, the postgraduate school is not to be decried. When rightly attended there can hardly be a more excellent institution. If the family doctor wants an outing and takes this means of brushing up on such parts of his work as he feels the need of, it were hard to imagine how he could better employ his time. But to return home and announce himself a specialist in surgery, or gynecology, or ophthalmology, after a six-weeks' course in a hospital is a distinctly dishonest procedure and one to be condemned.

No matter what the reason, whether it be the keenness of competition in medicine, or whether the six-weeks' expert in surgery doesn't want his patient to get into the hands of more experienced men, whether a mania for cutting has him oblivious to all sense of discretion or of the just consideration due the patient, in any event, the six-weeks' specialist is surely to be avoided. To him may be applied more than to any other the saying of old Diogenes, that the physician is fortunate in his calling, since his successes are evident, while his failures are hid beneath the ground.

Such a specialist cuts when there is oftentimes no occasion to cut; to him every stomach-ache points to an appendix that has got to come out. It is he who takes the wildest chances, who does operations on his patients that he would not dream of performing on a member of his own family. The poor patient, unaware of the risk he is taking, is led like a lamb to the slaughter.

The Mania for Surgical Work

There seems to be a mania for cutting nowadays. It is becoming irresistible; embryo specialists cut down on gall-bladders to remove gallstones—and find none there to remove; the knife seeks tumors which turn out to be only phantoms; the operator goes after an appendix which he finds perfectly normal, removing it nevertheless and “sav-

ing his face” (and his fee) by explaining afterward that this tissue is of no use whatever and anyway had best come out, since it might cause trouble at any time in the future. It makes one sick to look upon this horrible work. Doesn't it make you shudder when you think of the chances the patient takes?

Now, all these observations seem to emphasize the merits of and the need for the good old family doctor. It would be a great mistake if he were permitted to die out entirely. If he were to go pretty much everybody else would die with him—and that prematurely too. He ought to be revived and put again upon his good old-time pedestal. He deserves it. He knows one thing about the patient he serves that is more important for the latter than all the knowledge of a hundred specialists: he knows the patient's constitution, his peculiarities and his environment. He has probably been the first to welcome the patient into the world of misery and of compensating joys. This doctor has seen that patient through summer complaints, the mumps, the measles; has seen him through the green-apple stage of existence. He has made the world less miserable for that patient and has no doubt done much to increase the sum of his happiness.

The family doctor is often able to say with truth: “I treat the patient and let the disease die.” On the other hand, the specialist has not infrequently had to admit: “I treat the disease and let the patient die.” Another point is this, the experienced family doctor knows what he can do and just what he can not do. What he can do there is no occasion for any one to do in his stead at much higher rates. What he can not do (and this is no discredit to him) he frankly advises should receive the specialist's attention, at least for consultation, and he is more likely to seek a specialist for his ability and not his fees.

The General Practitioner Can Do a Larger Percentage of Work

The general practitioner can do very well nine-tenths of the work that is done in the various specialties—and why shouldn't he? Hasn't he spent thousands of dollars to

learn, and given ten or a dozen years in his life to study? It is not honoring the most helpful man and the best and most devoted friend in all human experience to put him in the place of the middleman between the patient and the specialist. It is the sensible experienced family doctor who knows how to put things in their right proportion, who doesn't consider every stomach-ache an appendicitis, every headache a meningitis, every cough a tuberculosis, every swelling a cancer; who doesn't have to find his profit in "scare-heads," who has the most sympathy for you, who comforts you during your last hours. It is he, also, who is always on the watch for a true appendicitis, meningitis, tuberculosis or cancer. Such a family doctor is an adviser to be trusted; one who can be depended upon to tell his patient the truth about his ailments. Whenever he operates it is for a reason and the idea of increasing his income is no part of that reason.

The safest man among doctors to consult when you are ill is the good old family doctor. Long may he be with us!

[Dr. Peters has assuredly given us a witty presentation of the relative merits of the family doctor and the specialist; but, really, he has not done the latter justice. When we stop to think of it, there isn't one

of us who will not admit that it is impossible for any man to acquire and assimilate, much less apply, all available knowledge concerning even one portion of the human body. The additions which are being made yearly are simply astounding; even medical editors can not keep up with them! Under the circumstances it becomes absolutely impossible for the general practitioner to treat with success many regional ailments demanding for their mastery, knowledge, and skill such as are acquired only by long study and experience.

What the general practitioner can not do *well* he should not attempt to do at all, providing another and more skilful man is available. The world needs the specialist—that is the reason he is so much in evidence; and the world should certainly be grateful to him for much fine, scientific work and for thousands of lives saved. The specialist and family doctor ought to work side by side and in perfect harmony; and the remuneration of the latter should be just as generous (since his responsibility and his learning should be just as great) as that of the former.

All Dr. Peters' condemnation of the *pseudo* specialist (whether of the six-weeks' variety or not) we heartily indorse; and we agree with him that the general practitioner does not get the honor (nor the pay) that are his deserts.—ED.]

"The Chutmuck"

By GEORGE F. BUTLER, A. M., M. D., Chicago, Illinois

IT had been a busy day for The Chutmuck. It was eight o'clock in the evening, and he had yet one more call to make before going to the Chutmuck's banquet where he was to respond to the toast, "The Bachelor and What He's Missed." Driving rapidly into a poor district of the city, he stopped in front of a modest flat and entered the building. A woman, pale but beautiful, apparently about thirty-three years of age, admitted him into a meagerly furnished parlor where another physician was waiting.

"How long has he been sick?" asked The Chutmuck.

"Three days," replied the Attending Physician.

"You are sure he has appendicitis?"

"Yes, quite sure."

"Well, let's look him over," And they went back to a small bedroom at the end of the dimly lighted hall.

"How are you, George?" said The Chutmuck.

"Up against it, I reckon," replied George, as he extended his hand, which was apparently unnoticed by The Chutmuck, as at that moment he turned to speak to the Attending Physician.

After the examination, which disclosed the fact that the patient was suffering from appendicitis, the two doctors and The Woman returned to the front room.

"You'd better have Henkins operate at once," said The Chutmuck.

"But I want *you*," said the Woman. Then The Chutmuck took her one side, and they talked earnestly for a few minutes. But The Woman prevailed, and The Chutmuck requested the Attending Physician to have the patient removed to the hospital and prepared for an operation at midnight.

* * *

It was the Chutmuck's night. For four days the brainiest men in the medical profession had met in serious discussion at the annual meeting of the American Medical Association. But this night the Chutmucks, as they called themselves, an organization of fifty or more convivial doctors, had assembled, as was their custom at each annual meeting of the A. M. A., to forget for a while the tragedies of life in frivolity and fun.

The Grand High Mufti, who acted as Toastmaster, was at his best. He had introduced several of the speakers of the evening in his usual happy manner.

"I have the pleasure now," said he, "of calling upon a real live bachelor Chutmuck, though he is old enough to be a bald-headed father. He is now passing through a serious epoch of his life," and turning to The Chutmuck he continued: "Now, at this critical period of your life, let us hope that you have in their completeness all the qualities of the Chutmuck. And what are the essentials of the true, the real Chutmuck? Why, the four B's, of course.

"The first B, the brains in good form, that direct him.

"The second B, the backbone, rigid, firm and unmovable, that controls him.

"The third B, the blood, in which the red blood-corpuscles, properly, largely exceed the white, full-charged with rich, red hemoglobin.

"The fourth B, the beauty, not the beauty of face, form and figure, which cuts no ice and availeth little, but the beauty of character, which attracts friends, holds them, and loves to serve them.

"The true Chutmuck is a lover—or should be one. Rarely do we find a

confirmed bachelor Chutmuck. Our bachelor member, it seems to me, must be shy on one or more of the four B's. He may never have experienced the perilous happiness of being in love. Speaking of the danger and ecstasy of love, let us all drink to this toast of Love, before listening to our friend telling what bets he's overlooked.

"Drink to thine eyes, brighter than stars,
Glowing with fire burning in Mars.
Drink to the lips of rare delight—
To the rippling laughter that gladdens the night.
Drink to the tresses of burnished hair
That float like mist on the slumberous air.
Drink to the arms that clasp you tight
And thrill your being with sweet delight.
Then again to the lips, sweet with nectar, drink,
And lose your soul o'er the perilous brink;
Let the topaz and ruby blend in a flame
And touch to your lips while you breathe one name,
Then steep your senses in the magic spell
That makes Love's Paradise the crest of Hell.

"And now," continued the Grand High Mufti, "we will listen to our bachelor friend, who, like a truthful Chutmuck, will tell us what he's missed. I call on him this early in the game, as he assures me that he has an important operation to perform at midnight."

The Chutmuck rose and was greeted with vociferous yells. Puffing a huge volume of smoke into the cloud-laden air, he placed his cigar on the table and soberly and seriously looked into the faces of that boisterous, laughing crowd of doctors. The hilarity quickly subsided, and the great hall was as still as if he were about to discuss the most important medical topic of the day.

"Gentlemen, although I am a bachelor, I have not missed Love's Paradise," he said, "for I have stumbled and tottered on the crest of Hell, and have been stifled and strangled with its sulphurous fumes until I have longed to pitch headlong into its black, unfathomable depths, if, by so doing, I could gain oblivion. Yes, I have tasted both Paradise and Hell, but what have I missed?

"I have missed a wife's kindly glance and speech of loving encouragement that nerve and sustain the physician in his noble endeavor. I have missed her infinite comfort in moments of desperate encounter with fate, so that my early years of privation and study have at times seemed a thankless sacrifice and ambition, but a luring delusion of irony. And now that fortune and fame have smiled upon me, I have missed the joy of knowing

there is someone to be gladdened by my laurels, someone to share my pride and sweeten the consciousness of honorable achievement.

"On the other hand, had I failed, I could not have known when the steep had been laboriously climbed, and, in place of an enchanting landscape, only the desert of disappointment lay before my bewildered vision; when the blight of mediocrity had withered the fair flower of hope, I could not have known how tenderly precious it would be to feel that there was one to cross with me that barren waste, hand in hand and heart to heart; to take courage with me at sight of the charming oasis that rose like a castle in the air, in unattainable mirage, and long with me to quench the thirst of years beneath its spreading palms. And when the mighty shadow of the unseen casts the penumbra of its dread eclipse upon the days that are departing, and I, who have watched many a fellow mortal pass within the solemn portals, must myself answer the summons of the recording angel's voice—I shall not enjoy the happy calm of an abiding affection, endeared by the most sacred earthly bonds, which shall be, as it were, my passport to heaven."

The Chutmuck's face was a study. His words were unmistakably extemporaneous. He came from Kentucky, where one can still detect in the fervid declamation of her gifted sons some resonances of Henry Clay and Tom Marshall. Pausing a moment, he again launched forth into an eloquent improvisation of marvelous volubility that rose and fell with beautiful periods and held his listeners spellbound.

"Missed! Let me tell you. I have been denied the sweet privilege of whispering into the listening ears of a loving wife—ears that would not tire of listening because it would be I who whispered—the vagaries and fancies, the glowing thoughts and ambitions that come to me from time to time. I have missed a home, with a sweet-faced creature by my side, there, because she would love to be there. I have missed the sweet prattle of loving children and the tender touch of their soft, pink arms around my neck. I have missed being welcomed by a winsome creature who would call me "Papa," and

who would have eyes and hair and smiles so like her mother's.

"I sometimes think God's ban is on me for:

'All blessings which enrich the lives of men
Dissolve from me like phantoms. Kith or kin,
Wife, child, nor anyone to love me when
I cry out from the coils of pain wherein
My breath is strangled, have I; no, nor then,
When the worst devils tempt me, can I win
One pitying gleam from the stern heavens, which
fling,
My prayer back to me as a leprous thing!'"

Then looking at his watch, he added: "I beg you to excuse me, gentlemen, I have barely time to reach the hospital. Good-night."

With these words The Chutmuck abruptly finished his speech and quickly left the room. It was raining heavily, but he plainly heard the applause from the banquet hall as he was rapidly driven away.

* * *

It was just midnight when The Chutmuck stepped into the hospital.

The patient was being anesthetized in an adjoining room when he entered the operating room, but was soon wheeled into his presence ready for the operation. A Pugnosed Nurse remained at the head of the patient, giving the anesthetic. Stepping to the patient's side, The Chutmuck turned to a Nurse of Uncertain Age behind him at the instrument table, saying curtly

"Scalpel!"

The knife was handed him, and by a swift, steady stroke, it sank quickly through the skin over the abscess. The blood from a small artery spurted unheeded upon his arm. The Interné seized the vessel with the forceps. The Chutmuck then proceeded cautiously to divide the succeeding layers of muscle till he had almost reached the peritoneum. Here the tissues became soft and edematous and the surgeon's keen touch warned him that he was almost upon the abscess. He was carefully dissecting his way through this tissue, when The Interné was startled by an almost imperceptible gasp from The Chutmuck, and, glancing quickly up he saw his eyes fiercely fixed upon the patient's abdomen. His chest heaved with quick, deep breaths, and an expression came upon his face that caused The Interné to start and nearly drop the instrument he was holding.

The Chutmuck grasped his knife firmly, and, to the Interne's intense astonishment with a single stroke slashed through the tissues into the peritoneal cavity. A jet of putrid pus gushed through the opening. The Chutmuck thrust his fingers into the wound, but at this instant he seemed suddenly to restrain himself, and stood for a moment motionless, his eyes staring, his jaws firmly set, his every muscle tense. It was only for a moment, but The Chutmuck lived a lifetime in those few seconds. He saw his patient dead and buried. He heard men say: "Poor George! He died of appendicitis. But, then, he's better dead than alive, perhaps; he was no good anyway, and his wife will be better off without him."

Then other thoughts surged through his brain. He thought he was realizing what only an hour before he had told his medical friends he had missed. He was now whispering into the listening ears of his loving wife his vagaries and fancies, his glowing thoughts and ambitions. He felt her breath grow warmer and warmer as her kisses fell upon his hair and eyes and lips. He felt the joy of living in a close, clinging embrace, to the full knowledge of bliss. He felt the soft arms of children about his neck, and then, suddenly, as if by a fearful effort, he violently jerked his hand from the wound with such force as to hit and knock the retractor from the hand of the Junior Interne. The fall of the instrument seemed to startle him, and he blurted out:

"Damn it, a sponge!" He took the square of gauze, then added, in his usual calm voice: "My face, please, nurse." And the Nurse of Uncertain Age gently wiped away the great drops of sweat from his brow.

After a few moments the appendix was found. It was lifted up into the wound, ligated and cut off.

The cavity was carefully sponged dry and all bleeding stopped. A few sutures were then put in, partially closing the wound, a small gauze drain being left in.

The Assisting Internes stood wondering by as The Chutmuck put on the dressings and applied the bandage himself, an unusual thing for him to do; felt of the patient's pulse, observed his color, and the character of the respirations, then quietly said as he left the room:

"He is in good shape. Put him to bed and watch him carefully."

"The old man is cranky to-night," remarked the Junior Interne.

"He has these spells every now and then," said the Senior Interne.

"I've heard he was disappointed in love once," said the Pug-Nosed Nurse.

"That's true, I guess," replied the Nurse of Uncertain Age. "They say she married another man who wasn't much account."

* * *

As The Chutmuck entered the dimly lighted reception room on the ground floor of the hospital, a woman from a remote corner of the room hastened to meet him.

She clasped both his hands, and they stood there silently, looking into each other's eyes.

The storm raged furiously outside; the rain beat in torrents against the windows. The wind shrieked and moaned like a lost soul. The clang of the patrol, and the clash of the wheels on the street-car tracks were heard for a moment above the roar of the tempest.

In a voice of suppressed emotion, The Woman asked:

"Was the operation successful?"

He felt a sudden spasm of her hands as he answered,

"Yes."

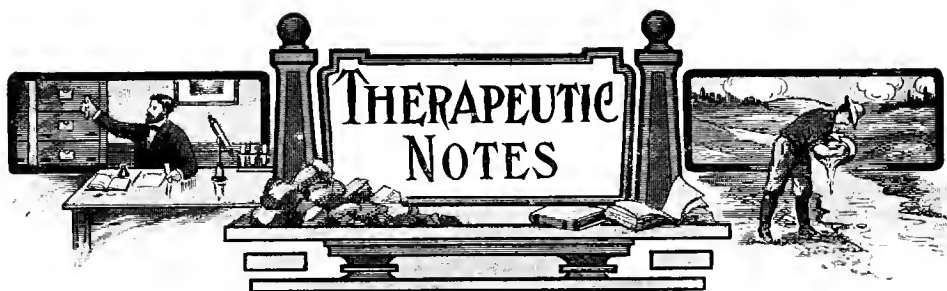
"Will he live?" she inquired.

"I think he will."

"Oh, My God," said The Woman, and she sank into a chair and buried her face in her hands.

The Chutmuck stood still. Then a look of unutterable tenderness came into his eyes, and he went out into the night.





ERGOTOXINE AND ERGOTININE

Recent investigations of ergot have shown that Kobert's cornutine is a decomposition product and does not exist as such in fresh ergot.

The activity of this drug is now believed to be due to a powerful amorphous alkaloid named ergotoxine, and another crystalline one named ergotinine, both freely soluble in alcohol. These substances are closely related chemically and easily interconvertible.

Ergotoxine is very much more powerful. It produces ataxia, dyspnea, salivation, gastrointestinal irritation and peripheral gangrene. It stimulates plane-muscular organs, especially the arteries and the uterus, and later produces a peculiar vasomotor reversal and a similar condition of the uterus. This means the alteration of the mechanism so that these organs respond to adrenalin in a manner opposite to that ordinarily observed. Adrenalin usually causes vascular and uterine contraction, but after large doses of ergotoxine it causes relaxation.

Ergotoxine causes tonic contraction of the pregnant uterus, the fetus expelled usually being dead, or it may be asphyxiated without being expelled. The continued use of ergotoxine develops tolerance.

THE VARIABILITY OF DIGITALIS AND ITS PREPARATIONS

The Therapeutic Gazette for December 15, 1910, quotes Pratt's article in *The Boston Medical and Surgical Journal* for August 18, in which attention is called to the variability in the strength of the digitalis preparations. He says that "not unfrequently large doses of the tincture can be given without produc-

ing any material effect, because it is almost inert." Tests made upon frogs and human beings with some of the leaves sold by jobbers of high reputation proved them to be almost inert, while some of the other samples were decidedly active.

As digitalis is a drug which is used largely in desperately critical conditions, Dr. Pratt properly emphasizes the necessity of employing good preparations which can be depended upon to give results. A life may be lost because the drug used is inert—a life which might have been saved if the remedy used had been a good one.

NUCLEIN VALUABLE IN CHOLERA

A. G. Pissarev reports in *Semaine Médicale* (abstr. in *The Prescriber*, Dec., 1910) a number of cases of cholera, which he treated by injection of sodium nucleate, 5, 8 or 10 per cent in normal salt solution, together with nuclein internally in 2 1-2 grain doses. The injections were given once or twice, and the nucleic acid three or four times daily. Only three deaths occurred in eleven grave cases. The other measures usual in the treatment of cholera were not neglected.

ABORTION OF SYPHILIS

In the excitement following the introduction of "606," Hallopeau's proposition, to abort syphilis by a month's treatment, seems to have fallen unnoticed. He makes a daily injection into or near the chancre, besides a daily injection of mercury benzoate into the gluteal muscles, and the administration of potassium iodide, 15 to 30 grains daily. The injection he employs consists of hectin, sodium benzosulphoneparamene-

phenylarsenate), 20 centigrams in 2 Grams of distilled water.

Mariotti secured equally good results from daily injections of mercury oxycyanide, 1-20 grain. De Aragao employed atoxyl and arsacetin in 127 cases, with similar good effect. Bouquet (*Le Monde Médical*) says, the only criticism is that the method has not been subjected to the test of time. While awaiting the coming of "606," we may avail ourselves of these suggestions.

OPERATIVE TREATMENT OF HEMORRHOIDS

The following detailed directions for the operative removal of piles are reproduced *in extenso* from an article in *The Medical Summary* for July, 1910, by Dr. E. S. Harris. This procedure he calls "ideal" for ordinary cases.

The parts are washed clean, after having the patient go to stool, and each external tumor is injected with a 2-percent solution of cocaine. The needle should be introduced quickly and at the base of the tumor and sufficient solution injected to make it stand out prominently. When the drug has had sufficient effect, so that the patient does not feel the prick of the needle at the apex of the tumor, he is ready for the "great ordeal."

With any suitable forceps, the tumors, each in turn, are picked up and, with curved scissors, an ellipse is taken from each, commensurate with the size of the tumor, the idea being to get about two-thirds or three-quarters of the hypertrophied tissue. This is sufficient to destroy the circulation and not enough to cause stricture. Care should be taken that the incision is made parallel to the rectum and that a little membrane is left between each point of operation. The bleeding is easily controlled by pressure and peroxide of hydrogen.

If the tumors are not too much inflamed, you may first introduce a speculum and see if there are any above the sphincter-muscle. These may be left or taken off at the first sitting, just as the operator thinks best. If I can get to them with little difficulty, and they are large, I remove them, otherwise I leave them till the stumps lower down are

well. The small tumors will usually go away and are there as a result of the irritation of the larger ones. When in doubt as to whether one should be taken off, leave it, and if it remains after the irritation has subsided, it may be removed with any others that may seem capable of giving future trouble. In this way you will be able to do just what is necessary, and no more.

The parts are now dusted with some soothing powder and a dry gauze dressing applied and held in place with a tight-fitting T-bandage. The bowels should not be encouraged to move for forty-eight hours, but likely will give little pain if they should. After a defecation the parts should be cleaned again and dressed as before. The membrane soon heals by granulation. The patient will be very grateful.

INFANT FEEDING AND SLEEP

A. W. Myers writes, in *Gaillard's Southern Medicine* for August, 1910 (p. 251) as follows, on the subject of the title:

"As to the question of awakening the child at regular intervals for feedings, each individual case must be decided on its merits, but it seems to me that the results of letting the child sleep as long as it wants to have been so satisfactory that I should hesitate to change. There are some children who show a tendency to turn night into day by sleeping for long periods during the day and waking frequently at night. In cases of this type it is well to rouse the child regularly for its feeding during the day in order to try to secure the longer period of sleep during the night, but in ordinary cases there seems to be an unusual freedom from digestive disturbances when the child is allowed to sleep as long as it will, and even when the number of nursings is reduced to four or five in the twenty-four hours the gain in weight is normal."

BENZIN FOR STERILIZING THE SKIN BEFORE OPERATION

Zatei (*Gazz. deg. Osped., through Brit. Med. Journ.*) has discarded iodine in the preoperative sterilization of the skin, owing to its occasional irritating properties. In

its place he has tried ordinary petrol (kerosene?) and benzin, and after an experience of over 700 operations he is convinced that the use of these liquids is entirely satisfactory for the purpose.

The parts are shaved the night before, if necessary, and no other special treatment is given until immediately before operation, when a good-sized piece of wool is dipped in ordinary petrol and the part lightly rubbed for about a minute. The swab is thrown into the fire and a fresh one dipped in purified benzin, and also rubbed over the part. The skin is not irritated thereby, and it is left slightly oily, which prevents staining by blood, and renders it easier to cleanse the patient after operation.

At first Dr. Zatei tried his method in minor operations, but finding it successful, he has used it in all his operations, including 195 radical operations for hernia, and 54 laparotomies. He says it is quite as effectual as the older and more drastic methods, and possesses this additional merit, that the petrol and benzin are cheap and nearly always at hand.

DRUG ERUPTIONS

Inasmuch as various drugs produce a characteristic eruption, this fact should always be borne in mind by the physician, so that he may not mistake them for disease-lesions. The following list has been compiled for *The Medical Summary*:

Bromide of potassium produces papules, pustules, ulcers, ecchymoses, pemphigus. Chloral produces erythema, itching, desquamation, eczema, petechia. Copaiba and cubebs produce pemphigus, erythema, eczema. Aconite produces vesicular exanthemata. Arsenic produces erythema, papules, vesicles, sometimes pustules. Iodide of potassium produces about the same as arsenic, but more marked. Mercury produces erythema, eczema. Morphine produces erythema, papular eruption, sometimes desquamation. Phosphorus produces purpura. Quinine produces erythema, eczema, hemorrhagic purpura, pemphigus, and sometimes a typical urticaria with dyspnea. Rhus toxicodendron produces vesicles, pruritus, redness and swelling of the skin.

Salicylic acid produces purpura, pemphigus, vesicular angina. Santonin produces vesicles, pemphigus. Belladonna, strychnine and stramonium may produce about the same skin manifestations as quinine; while turpentine gives rise to an eruption like that from copaiba.

A number of foods may produce an eruption in individuals having an idiosyncrasy against them. Thus, acid fruits may cause an acute eczema. Strawberries may produce urticaria. Apples sometimes produce an acneiform efflorescence about the mouth. Walnuts cause inflammation of the buccal mucous membrane. Shellfish and salt meats cause a hive-like eruption.

LIME WATER INTERNALLY FOR RECURRENT WARTS

A year ago a young lady who had been suffering for three years with warts on the hands came to Dudley Kennard, honorary surgeon of the Westminster General Hospital, London, for treatment. The condition was that known as verruca plana, and there were at least 300 to 400 warts on the back of each hand and wrist, but none on the face or any other part of the body.

Dr. Kennard, who describes this case in *The British Medical Journal* (cited in *Merck's Arch.*, July, 1910), ordered calcium chloride internally, but, as this had no effect, calcium iodide and liquor arsenicalis were tried, while at the same time various preparations were used locally. Then the author did not see the patient for a few months, but when she returned conditions were unchanged. He then tried cauterizing the warts with dilute solution of mercuric nitrate. After several applications the warts cauterized disappeared, and the patient began to cauterize the warts herself. Some of the caustic got on to the healthy epidermis and edema of the hands developed, which subsided in a day or two under local applications.

Being dissatisfied with the lack of progress, he now sent the patient to an eminent skin specialist. She was under the specialist's care for four months, and he tried various modes of treatment: magnesium sulphate internally, liquor carbonis detergens in alco-

hol locally, and x-rays; all these having failed, he resorted to scraping each wart and applying pure carbolic acid. This had the desired effect on the wart treated; but during this time fresh crops appeared, and the patient came back to Dr. Kennard, in October, quite discouraged.

As local treatment appeared useless, since crops of warts kept appearing, the doctor fell back on an old remedy, and ordered her to consume half a pint of lime water a day. In the course of four days all the warts disappeared, and since then (two months) no fresh outbreak has occurred.

THE SERIOUS NATURE OF MUMPS: A WARNING

Dr. Sidney J. Meyers of Louisville, Kentucky, read an important paper on parotitis before the Medico-Chirurgical Society, which is published in *The Louisville Monthly Journal of Medicine and Surgery* for July, 1910. The doctor points out that mumps, or epidemic parotitis, is undoubtedly an infectious disease, caused by a microorganism, not as yet isolated, which by its own presence or by the toxins it produces, or by both, gives rise to disease. A foreign material is sent through the blood stream or lymph-channels, and therefore mumps is something more than the mere local manifestation of an enlarged parotid gland. While it is generally a mild infectious disease, sometimes complications arise, placing a rather grave aspect on our cases.

Dr. Meyers then describes several cases in which severe fever and illness were produced by toxemia and in which the entire organism of the patient was seriously affected.

In the discussion, Dr. A. M. Vance voiced the opinion that many of the atrophied ovaries we meet with are due to the "going down" of mumps, just as it goes to the testicle in the male. Time and again he has quizzed the family in such cases and has frequently found a clear history of mumps in babyhood or childhood.

It is very important that we should impress the parents of our little patients with the grave possibilities of this disease, which all too often is referred to as "just mumps."

and is, as Dr. Meyers points out, very often treated "over the phone, or in the office without seeing the patient." Such a haphazard and slipshod practice is little short of criminal and is, in the event of complications, first of all resented by the parents, although they may have been adverse to calling the doctor and incurring any expenses on a case of "just mumps."

Being due to bacterial infection, parotitis is capable of producing severe intoxication and metastasis to distant parts. These should be prevented by the usual methods of cleaning out and keeping clean, and by full doses of calcium sulphide to saturation. Nuclein in large doses (20 drops twice daily on an empty stomach) will assist the body in combating the infection. Locally the greatest cleanliness is required, especially in the oral cavity, lest the infection extend into the eustachian tube or in other directions. It goes without saying that patients ill with mumps should be isolated, because it is utterly foolish to let other children take the disease so as "to have it over with, as the saying is."

SCARLET-RED (EPIDERMAL) AS A STIMULANT OF EPITHELIAL AND EPIDERMAL PROLIFERATION

P. F. Grossmann (reviewed in *Therap. Monatsh.*, Aug., 1910), states that Fischer was the first to show, by animal experiments, that the fatty coloring substance known as scarlet-red, or amidoazotoluol-azobetanaphthol (amidoazotoluol, for short, with epidermal as its trivial name) stimulates the epithelium to a rapid and atypical growth. Grossmann has used scarlet-red ointment or a gauze with good results in several instances, and has thereby obtained, he claims, effective stimulation of epidermic growth.

Since often fatty applications are undesirable, Grossmann in such cases employs a gauze impregnated with a 4-percent alcoholic solution of scarlet-red, calling this epidermal gauze. While he employs and recommends the gauze for operations in the ear, it would seem that it is applicable in all surgical conditions where a stimulation of new epidermis is desirable.

It should be added that in the discussion of the Berlin Otological Society, before which Grossmann made his report, the remedy was not judged in an equally favorable light, in fact, opinions expressed by some were distinctly unfavorable.

SCARLET-RED IN OPHTHALMIC PRACTICE

Genty directs attention, in *La Clinique* (cited in *N. Y. Med. Jour.*, Sept. 3, 1910), to the advantages of scarlet-red as a non-irritating inodorous application in certain eye affections, its use being especially indicated when a rapid proliferation of epithelium is desired. Applied as an ointment, in the strength of 1 percent, it is less irritating than the mercurial ointments ordinarily employed in suppurative infective conditions of the cornea, although its action is less powerful. It appears to be especially effective in the treatment of inflammation of the eyelids and of corneal ulcers, whether of traumatic or spontaneous origin.

The following formula has been found to give the best satisfaction:

Scarlet-red	grs. 3
Woolfat	drs. 5
Petrolatum	drs. 4

This is applied to the eye twice daily in the same way and in the same amount as ointment of mercuric oxide.

Members of our staff have done some experimental work with scarlet-red ointment in the treatment of ulcers, but have not found it entirely satisfactory on account of the irritation produced, this sometimes being extreme.

THE INFLUENCE OF DRUGS UPON PHAGOCYTOSIS

In *The London Lancet* (quoted in *Ther. Gaz.*, Aug., 1910), Dr. Reynolds, of the British Army, reports some experiments upon the influence of opium and morphine on phagocytes, and quotes work in this direction by Cantacuzene as early as 1898. This latter investigator found that opium inhibited the out-wandering of white cells and that it seemed distinctly to enfeeble these

bodies, so that when they surrounded cholera microorganisms they fell victims to the invader instead of being successful destroyers of the pathogenic microorganisms, in the struggle for supremacy.

As to his own experiments (which were really too few in number), morphine very distinctly diminishes phagocytic activity, the white cells which contain organisms numbering only 89 in the presence of morphine, as compared to 168 in its absence; this being in the case of one cavey. In the case of a dog the leukocytes that contained microorganisms before morphine numbered 123; half an hour after morphine was given, there were only 64; and one and one-half hours afterward only 29. Reynold's conclusions are that morphine, in the presence of acute infectious processes, not only does harm in that it masks the symptoms and locks up the bowels but also by diminishing one of the important means by which the system successfully combats invading hostile microorganisms.

DIGITALIS AND HYPERTROPHY OF THE HEART

In experimental tests on rabbits and dogs made by Caro of Berlin (noticed in *Wien. Med. Woch.*, 1910, col. 2647), the author found that by extended digitalis dosing of experimental animals a hypertrophy of the heart is produced in comparison to the findings in control-animals, which had been selected as much alike as possible. This hypertrophy must be considered as a consequence of the increased work of the heart due to digitalis and may be taken to correspond to the strengthening of a muscle by training. It is thus to be taken as something useful.

The effect of digitalis is an elective one and affects only the heart-muscles. No alterations were found in the vessel-walls. The author did not observe cumulative symptoms, in spite of the relative long duration of the experiment. These experiments may possibly speak in favor of a prophylactic digitalis treatment (as suggested by Cloetta) for a congenitally weak heart; also of a recent endocarditis or of a commencing valvular lesion.



Antispasmodic Action of Hyoscyamine in a Cataract Operation

A LADY, sixty years of age, robust and very healthy, was afflicted with an old and hard cataract, and the physician was ready to operate on it after preparing the patient with aconitine and a laxative saline, and the iris with atropine. He intended to make a keratotomy of the lower half of the cornea. The patient felt herself quite courageous, and so did the physician. But when the former fixed her eye there was at once a spasmodic twitching of the globe of the eye, which neither the patient, the tenaculum nor a Barnard's lance could restrain. The operator was about to give up the operation for the time, when it occurred to him to try hyoscyamine. After administering a few granules, at short intervals, he found he could begin the operation.

The section of the cornea was well done, but the aqueous humor having escaped badly, the iris contracted at once and completely. Was it the sudden contact with the crystalline lens that did this?

The operator ordered the patient to lie down and remain quiet for half an hour, during which time he used atropine without effect. He intended to make an iridectomy, to finish the operation, then he thought of hyoscyamine for the second time. After its use the pupils dilated, the lens stood out majestically, and after this the capsule was opened.

The assistant who saw the operation was stupefied. The bandage was placed as usual and the operator directed that aconitine and digitalin be taken. Two days

later the patient received effervescent magnesium sulphate. There was no fever following the operation, but some slight pain the first day and a definite keratoconjunctivitis. The corneal wound cicatrized very well and soon. At the end of eight days the bandage was removed, as unnecessary and inconvenient, and the treatment was reduced to dark light and to laxative salines.

On the twentieth day the ex-blind lady enjoyed her sight perfectly and called the doctor's attention to the flowers that were placed on the window before her face.—By DR. HENRIQUE CABALDON, slightly altered from *Repertoire Universel de Médecine Dosimétrique*, Vol. X, p. 148.

TETANUS CURED BY LOCAL ANTISEPTIC TREATMENT

Under the above title M. Poucel presented his observation of a case to the Société de Chirurgie de Marseilles, which made him skeptical toward preventive serotherapy and convinced him of the prophylactic importance of local disinfection of suspected wounds, notions which have gained great credence at present.

The case was that of a patient who had his right tendo Achillis cut by a mowing machine. The wound was sutured after being antiseptically treated, and united by first intention; but nineteen days after the accident the first symptoms of tetanus made their appearance. Then antitetanic serum was injected daily during twenty-one days consecutively.

Dr. Poucel did not see the patient till forty-one days after the initial accident. The patient's condition was then quite serious: Temperature 40.4°C . (104.72°F .), pulse 140, and intellect befogged. He opened and freshened the wound by cutting away all recent tissue formation and eradicated with the thermocautery all extraneous substance. He then injected six Grams (one and a half drams) of Van Swieten's solution (corrosive sublimate 1 : 1000 without alcohol), at a depth of three centimeters (3 2-5 inches) under the cauterized zone. The condition of the patient, which seemed worse the next day, became rapidly better thirty hours after the intervention. His temperature fell suddenly and the patient recovered his health with a rapidity surprising both to him and the doctor.

The author feels certain that the nature of the affection was evident and that with the opinion of three consulting physicians he thinks that the serum which had been injected in this case contributed nothing to its cure; that the local treatment, and especially the corrosive-sublimate injection, killed the germs, and, finally, that the tetanus toxins had been oxidized by the electrocautery.

Imbert is of the opinion that antitetanus serum has no curative value at all, and for some years past the tendency has been to doubt its value after the disease has developed. He thinks, however, that this serum is indicated in suspicious traumatic cases, but it should be employed within twenty-four hours after the injury.—*La Province Médicale*, 1910, p. 19.

A MOUTH COOLER

Dr. Max Robitschek, former assistant physician at the General Hospital of Vienna, Austria, writes as follows in the *Wiener Medizinische Wochenschrift*, 1910, No. 19:

On the occasion of a typhoid fever, which I had to go through in 1907, I experienced in my own body the torturing syndrome of dry mouth, which is apt to occur in a patient suffering from a high fever. I found out how powerless our therapy is in the presence of this sensation of heat in the buccal mucosa with the dry tongue. Neither

brushing with glycerin (disgusting with its sweetish taste) nor pieces of ice, nor cleansing the mouth with a menthol-perhydrol mouth wash, nor a decoction of althea root is able to give relief for even a few minutes after their immediate use. The same may be said of gargles with ice-cold mineral or soda water, which is the best-tasting of all the other remedies. What severely sick patient has strength enough to sit up and gargle continually and then spit it out into some vessel? With what exhaustion he sinks back upon his pillows, only to attempt again, by the nurse's aid, to relieve himself with the cooling liquid from the wretched sensation in his mouth.

Thus I suffered and thus suffer many other patients, though not all, and not all as intensely in every sickness; but almost always where there is an abnormally high temperature, and most so in infectious diseases, such as sepsis, typhoid fever and tuberculosis, also in poisoning, and after operations under narcosis.

I believe, therefore, that a mouth cooler which I have devised fills a need in the therapy at the bedside, and so its construction will be described here.

The instrument consists of a flattened tube of hard glass bent upon itself and shaped so as to follow the outline of the tongue and provided with a handle. The two open ends are shaped for the easy and safe attachment of soft-rubber tubes, the one tube to be attached with one end to one end of the instrument and with its other end to a water-reservoir, and the other soft-rubber tube is attached to the other end of the instrument, and its other end left to empty the flowing water into a vessel on the floor. The water is to be kept at a temperature of 50°F . [Various improvements in the bending of the ends of the glass tube will suggest themselves. So, too, the connection of the rubber tube with suitable vessel as a reservoir by means of a glass siphon; a rubber bulb being inserted in the rubber tube to start the stream would be another improvement.]

The hard glass is best for the tube on the score of cleanliness and absence of taste in the mouth. An attempt to crush it with the teeth resulted negatively. It can be made of course of any metal, and nickel plated.

It is made of two sizes, suitable for adults and children.

The instrument should be sterilized by boiling before being put into the mouth, which the patient is left to do himself, and his attention should be called to the fact that the contrivance will not only cool his tongue, lips and palate, but the mucosa of the cheeks also.

The mouth cooler can be kept in place if necessary by means of tapes tied to either limb of the instrument, the free ends being pinned to the pillow with a safety pin. The attempt to fix the mouth cooler in place by fastening it like spectacles behind the ears provokes nausea and is therefore undesirable.

The simplicity of the instrument enhances its usefulness. Patients use it gladly and are full of its praise. No complaints were ever heard of its interfering with the teeth, which would theoretically suggest itself. But there seems to be a great difference between rinsing the mouth with cold water, which comes in touch with all the teeth, and this mouth cooler, which touches the chewing surfaces of only four teeth. Patients with carious teeth who could not use cold gargles on account of provoking toothache have made no objection to the mouth cooler.

In the wards of Dr. Latzko, in the Wieden hospital, where there were no cases of sepsis at the time experiments were made with the mouth cooler, the instrument proved itself completely effectual in the majority of cases of patients who had been operated upon under narcosis. It reduces the feeling of thirst and diminishes the subjective sense of dryness in the mouth, so that it becomes unnecessary for relief to subject the patient to the danger and disagreeableness of vomiting, which is very apt to take place on the ingestion of the least bit of fluids the first and second day after operations under narcosis.

How far this mouth cooler might be used in gingivitis, stomatitis, alveolar pyorrhea, aphthae, odontalgia, and traumas of the tongue, remains to be seen.

The apparatus is easily improvised and it is strange that no one has thought of it before, since we have had in use coolers of

this construction for the eyes, ears, head, heart, vagina, rectum. Why then should this important organ of sensation, the mouth, have been so "step motherly" neglected? [The author seems to belong to the physicians of a past régime, whose professional dignity would not permit them to seek for patent rights for an invention that must prove useful for suffering humanity.—THE GLEANER.]

PROPER TEMPERATURE FOR PASTEURIZING MILK

Moze, Gerault and Direscu point out that in pasteurizing milk the temperature must not be kept too high or else there will ensue a destruction of the physiological ferments of the milk and its action is changed. It is enough to raise the heat to 67° or 68° C. (152.6° or 158.4° F.) in order to destroy all pathogenic germs, if it is maintained sufficiently long, say, ten minutes.—*N'ien. Mediz. Woch.* 1915, col. 44.

FOSSIL HUMAN REMAINS

Marcelin Boule has collected various parts of a fossilized human skeleton at Chapelle-aux-Saints. By the trunk, members and skull he was able to assign these parts to the human group. Yet the skeletal parts present a mixture of characters, some actually human, and others inferior.—*La Médecine Orientale*, 1909, page 460.

INCARCERATED HERNIA REDUCED WITH ATROPINE

According to a note in Merc's "Annual Report" for 1908, H. Rabel has demonstrated the value of atropine injections in four cases of incarcerated hernia occurring at widely differing ages. Thus a boy of three was given 0.003 Gram (gr. 1-25) in one dose; a boy of 12, 0.001 Gram (gr. 1-67) in one dose; an adult man, 0.006 Gram (gr. 1-10) in a dose; and a man of 81, 0.005 Gram (gr. 1-12) in two doses; and in each case prompt reduction was obtained within six to nine hours. In the experience of the author the doses used should not be too small.



Another Anti-Narcotic Bill: How About the Dispensing Doctor?

WE have had occasion to call the attention of our readers to two bills which have been introduced in Congress within the last two years, both intended, presumably, to curtail the traffic in habit-forming drugs. Unfortunately these bills were so framed as to impose a hardship upon physicians who dispense their own remedies. The first of these was the Mann Bill, introduced in the House of Representatives by James R. Mann, of Illinois, two years ago. The second was the Cullom Bill, introduced in the Senate a year ago by the senior senator from Illinois. The Foster Anti-Narcotic Bill (H. R. 25241) recently introduced in Congress, succeeds naturally to the two just mentioned. Though it differs somewhat in its details, its provisions are essentially the same as those of the Cullom bill.

The Foster bill provides "that every person who imports, exports, produces, or manufactures opium, morphia, coca leaves, cocaine, alpha and beta eucaine, chloral, cannabis, their salts, derivatives or preparations, and every person who further manufactures, compounds, deals in or distributes the aforesaid drugs, or either of them, shall register with the collector of internal revenue of the district his name or style, place of residence, and place where such business is to be carried on, and at the time of such registry, and on or before the first day of July in each year, every importer, exporter, producer, manufacturer, wholesale manufacturing pharmacist, wholesale dealer or jobber shall pay to said collector a special tax

at the rate of ten dollars per annum, and every retailer or distributor at retail shall pay to the said collector a special tax at the rate of one dollar per annum."

In addition there shall be levied upon all the aforesaid drugs an internal-revenue tax of five cents per pound or fraction of a pound, except on coca leaves, upon which the tax is one cent a pound or fraction of a pound; this tax to be paid by the affixing of stamps to each original package. When these drugs are further manufactured or compounded the packages or receptacles containing them must have affixed to them, in lieu of stamps, such labels or marks as will show the payment of the tax on the original drugs. Importers, manufacturers and compounders will be subject to the supervision of the Commissioner of Internal Revenue.

The feature of the bill of special interest to physicians is contained in Section 4, which makes it unlawful for any person or firm to send any of these "habit-forming" drugs to any person other than a person who has registered and paid the special tax, and which sets forth that it shall be unlawful "for any person to receive, in interstate commerce, any of the aforesaid drugs or any of their salts, derivatives or preparations, other than a person who is registered and has paid the special tax, as required by Section 1 of this act; but nothing contained in this section shall apply to public hospitals or scientific institutions."

Persons or firms who violate any of the provisions of this act shall "be fined not

less than five hundred nor more than five thousand dollars, or be imprisoned not less than one year nor more than five years, or both, in the discretion of the court." Mere possession of any of the forbidden drugs "shall be deemed sufficient evidence" of the violation of the law, the defendant being required "to explain the possession to the satisfaction of the jury."

This bill is subject to practically the same criticisms which we made upon the Cullom bill, in the April, 1910, number of *CLINICAL MEDICINE*. First it should be noted that no adequate provision is made to protect the rights of physicians. While the retail pharmacist is not distinctly mentioned, nor the physician himself, it seems likely that the former is to be made practically the sole means of supply, this giving him a monopoly upon the distribution of these important drugs. In other words the physician must buy of the retail druggist. Of course, upon the face of the law, physicians may be allowed to register with the local collector of internal revenue, but although the tax is small, in practice it is large enough to debar a very large percentage of dispensing doctors from registration, since the amount of morphine, cocaine, etc., used by the average doctor is very small. Furthermore, by taking out licenses doctors may become stigmatized, in a sense, as sellers or "peddlers" of habit-forming drugs, such as morphine or cocaine. How many doctors are there who would be willing to suffer this stigma? It must be remembered, in this connection, that these lists are open to inspection, thus exposing any physician who may be registered to harmful exploitation or persecution.

As we state in our April, 1910, issue: "If the physician does not or can not take out such a license he will be limited as to his supplies to the brands, quality of drug or form of preparation which the retailer (and in many localities there is only one retailer within a radius of many miles—and in some cases none) may be pleased to supply. He can not compel the retailer (usually a small tradesman of limited capital) to carry a stock of adequate size, variety and quality to meet his needs. He would also be compelled to pay whatever prices may be charged, being practically debarred by

law from resorting to other more or less remote but legitimate channels of competition. The penalties provided are very high: any person who violates the act, on conviction 'shall be fined not less than \$500 and not more than \$5000, and be imprisoned not less than one year nor more than five years, or both, in the discretion of the Court.'"

Furthermore, it is considered *prima facie* evidence of guilt if the defendant is shown to have or have had in his possession the aforesaid drugs, salts, derivatives, or preparations, "unless the defendant shall explain the possession to the satisfaction of the jury." In other words, even though these drugs were not obtained through interstate commerce, any meddling busybody who sees 100 morphine tablets or a few ounces of cocaine solution on the doctor's shelf may have him arrested, brought before a Federal Court (no matter how far from home) and tried for a criminal offense, threatened with a large fine and imprisonment, and the burden of proof as to his innocence will rest upon him.

It is not our purpose to present here the manufacturer's, distributor's or jobber's viewpoint, but as a matter of justice the doctor should bear in mind that the difficulties placed upon distributing firms by this bill would be exceedingly arduous. Think, if you will, of the numerous preparations—pills, elixirs, tablets, etc.—which contain minute doses of morphine, heroin, codeine, cannabis and other drugs coming within the provisions of this act. The mistake of a billing or shipping clerk in the employ of any large manufacturing concern might result in the sending of one of these preparations to some person who has not paid his dollar tax, as provided for by this law (and how can the shipper secure positive assurance on this point), and yet a mere clerical error of this kind would expose the distributor to a fine and imprisonment. As *The Oil, Paint and Drug Reporter* says: "The bill would impose an almost endless amount of work upon wholesale dealers who endeavored to comply with its provisions—and the penalty it fixes for non-compliance is enough to make the hardest pause."

We are just as anxious as any one possibly can be to curtail the sale of habit-forming

drugs, but we protest that any method proposing to do this which interferes seriously with the physician in his everyday work, or with the houses supplying his legitimate needs, which makes it difficult for him to secure the drugs which he needs and which are practically indispensable to his success, puts a tax upon his humanitarian work in the interest of mankind and makes him a prey to any possible grafter—such a method is radically wrong. We therefore urge every physician to use his influence to secure proper modification of this bill so that the rights of the medical profession shall be protected. This can be done by adding to Section 4, so that the last clause in it shall read: "that nothing in this Section shall apply to public hospitals, to public or scientific institutions or to physicians or veterinarians actively engaged in the practice of their professions." Provision should also be made for the protection of distributors from prosecution for clerical error, and the sale of dosage forms practically free from drug-habit danger should not be penalized.

As a matter of fact, the spread of drug habits cannot be placed at the door of doctors who dispense their own medicines. In the cases where the doctor is primarily responsible, in 95 cases out of 100 he writes prescriptions—these prescriptions being refilled time and time again (and usually without the doctor's consent) by the druggist. The physician who administers remedies with his own hands, and personally watches their effects, rarely indeed is responsible for a case of drug habituation.

Again, for the third time in as many years, we urge the readers of *CLINICAL MEDICINE* to protect their own interests, and to do this it is essential that they should write to their congressmen and senators and ask for a proper modification of this bill. Get busy!

CONJUNCTIVITIS IN CHILDREN

Of the numerous varieties of conjunctivitis I shall undertake to call your attention to those mentioned in the superscription, and discussion of the same in this paper will be as brief as consistency will permit.

To begin with, I wish to call your attention to the differential diagnosis between in-

flamations of the conjunctiva and of the iris.

In the first place, as characteristic of the congestion in conjunctivitis, we find the congested blood-vessels long and tortuous and narrowing in their caliber as they approach the cornea, thus giving a picture of active inflammation in the outer scleral zone that diminishes as the cornea is approached. In iritis, on the other hand, in addition to the congestion of the conjunctiva, there is also a very characteristic congestion of the ciliary vessels immediately surrounding the corneal margin, these being from one-thirty-second to one-twelfth of an inch in length, with their bases at the corneal margin and apices pointing straight out toward the sclera. So when we see a rosy-colored ring immediately surrounding the cornea, made up of short, straight, spike-shaped vessels, we may know we are dealing with an inflammation of the iris. By this we see that the nature of the congestion is a very important matter to remember.

1. Simple acute conjunctivitis is usually caused by a local irritant such as dust or other foreign bodies. It may accompany the exanthemata and other constitutional disorders, such as typhoid and other fevers, inflammation of surrounding parts also often giving rise to it. Colds may also be mentioned as a cause.

Occasionally we are called upon to treat an eye that has been the seat of a simple conjunctivitis for a number of days and on inspection we may find a small foreign body the cause of the trouble. After the removal of the cause, the treatment should consist in cold bathing of the eye and astringent instillations; one grain of alum to the ounce of water will answer very well, or you may instill a 2-percent solution of boric acid or a 1:500 solution of zinc sulphocarbolate in water. It is always best to continue treatment for a few days after congestion has disappeared, to prevent the possibility of its becoming chronic.

2. Acute catarrhal conjunctivitis, commonly known as "pink-eye", is due to the presence in the conjunctival sac of a bacillus, and the affection is highly contagious. There is marked congestion and swelling of the conjunctiva and it has that peculiar pink

color due to extreme congestion of the deeper fine vessels of the membrane. There is swelling of the lids with quite a free stringy discharge after a period of incubation of about thirty-six to forty-eight hours. The disease becomes fully developed in about three days and subsides in about ten. As to prognosis, this usually is good in the majority of cases.

The treatment consists in applications of ice five to six times daily, for half an hour at a time, and the frequent dropping into the eye of a solution of alum of 1 to 3 grains to the ounce of water. In addition, instillations of a 3-percent solution of protargol three times a day, and, if the discharge becomes profuse, applications to the everted lids of a 1-percent solution of silver nitrate.

Those attending these cases should exercise great care lest their own eyes become affected, and all dressing material employed must be burned—even towels are better destroyed than running the risk entailed in boiling then for future use. The foregoing treatment should be continued in a modified form for two weeks so as to prevent recurrence.

3. Purulent conjunctivitis ranks among the most important and destructive affections of the eyes, and the possible complications in this condition are many, while the danger to vision is great. The malady usually is caused by infection from the discharge of another person's eyes that are affected, or by the introduction of a purulent discharge from the genital organs into the eye. The gonococcus usually is found upon microscopical examination. The greatest percentage of cases are due to gonococcus infection.

Purulent ophthalmia sets in from twelve to forty-eight hours after infection; in infants the discharge commonly is noticed about three days after birth. There is itching of the eye followed by a watery discharge, swelling of the lids and conjunctiva, extreme congestion and profuse purulent secretion. The great danger in this affection is ulceration of the cornea, due to swelling of the conjunctiva, cutting off the nutrition, and to its being constantly bathed in pus; perforation of the cornea, or complete destruction of the eye from suppuration may result.

Treatment, at the time of birth, consists in wiping away all secretions from around the eye and washing out the conjunctival sac with a 3-percent boric-acid solution, then depositing a drop of a 3 percent silver nitrate solution in the eye. This is known as Credé's method and has greatly lessened the destruction to infants' eyes since its adoption.

The treatment of a case of purulent ophthalmia should not be started until a thorough inspection of the cornea has been made, while during treatment it should be inspected at least twice a day. If at any time the cornea appears hazy it will be an indication to use heat until the cornea is clear. Ice applications should be made almost constantly during the active part of the affection, the conjunctival sac being cleaned by irrigation with a 2- or 3-percent boric-acid solution; this being done as often as necessary to clear away all discharge.

In case one eye alone is involved, the unaffected one must be protected by means of a transparent shield fitted close to the nose and open for ventilation at the temporal side. In washing the affected eye, always be sure to direct the irrigation stream away from the sound eye, the patient's head being so placed as to have the sound one uppermost.

When the discharge becomes profuse, apply a 2-percent solution of silver nitrate to the everted lids twice a day, being careful that none of the solution comes in contact with the cornea; in addition, a 3-percent solution of protargol may be dropped into the eye three times a day or oftener. Upon the first sign of haziness of the cornea heat must at once be substituted for the ice, and as this is a most important point, it is plain why it is necessary to inspect the cornea frequently.

Although atropine is seldom employed in conjunctivitis, its use in careful hands will give rest to the iris rendered irritable by the inflammation close at hand. To prevent the eyelids from cohering and penning in the discharge, smear their edges with white vaseline or lanolin, while at night a 1-2-percent ammoniated-mercury salve should be put into the conjunctival sac.

The foregoing treatment must be carried out until all acute symptoms have subsided;

if possible, a trained nurse should be employed during convalescence. The treatment should be mildly stimulating. I find the inflammatory period greatly shortened if, during the entire course of the local treatment, I give the patient calcium sulphide to saturation and saline laxative every morning until all discharge is eradicated. Then I push the triple arsenates with nuclein to build up the patient. As a stimulator of the appetite, quassin is second to none in the line of drugs.

W. F. RADUE.

Union Hill, N. J.

THAT CARNEGIE REPORT

Apropos of the recent Carnegie Foundation report and its comments on the overproduction of ill-trained physicians, I would respectfully ask the privilege of recording my approval of what it says. Most of us, I imagine, if we told the exact truth, would say that we were not sufficiently trained. Any man who goes direct from the lecture room to private practice is inadequately trained. A minimum postgraduate twelve months medical service as interne in a good hospital, followed by six months surgical, six months obstetrical, six months gynecological and then six months clinical work covering all the specialties, should be required before a man could get his license to practise.

This license should be revokable for syphilis, gonorrhea, drunkenness, malpractice, immorality, cancer, tuberculosis, leprosy and insanity. A literary college course, while desirable, is largely ornamental. A good high-school course, however, should be compulsory; it should include four years of Latin, French and German, two years of Greek and perhaps one of Hebrew; one year each in general biology, botany, chemistry, physics and physiology. No man should be allowed to go into practice until he is competent and able to reduce any fracture or dislocation, repair a perineum, operate on any hernia or do any obstetrical operation.

The attendance on didactic lectures is a ridiculous waste of time. The professors could have their lectures printed and could

assign lessons and hold recitations on those lessons. In that way the students would not get their note books full of things the professors do not say. Undesirable and incapable candidates could thus be weeded out the first year.

A properly regulated high-school course would put a man in condition to go through a good medical school in three years and that would give him three years after graduation for the absolutely necessary hospital work, so as to get into practice at twenty-five years of age, which is plenty young enough. Clinical work during the college course is not only not essential, it is demoralizing to one's best efforts at study. Internes in hospitals should be given frequent examinations on subjects taught in the wards. A man could do an immense amount of purely scholastic work in three years if he didn't have to waste so much time attending lectures and clinics. One's time in college should all be spent in laboratory work, dissecting, studying lessons and reciting them, and leave the practical clinical work to be done after graduation.

I believe in a National Board of Medical Examiners. This would probably do away largely with present prevalent graft and favoritism abuses.

C. O. RICE.

Ramos Arizpe, Coah, Mex.

[The doctor's ideas are good but they do not fall in exactly with the spirit of the Carnegie report, which calls for longer preparation and a longer college course, rather than a shorter one. For instance, a high-school diploma or its equivalent is now required by practically every medical school in the country as a prerequisite to entrance upon a medical course. Several schools require two years of work in a literary college, and there are a few (and these are the ones endorsed by the Flexner report) which require the bachelor's degree. However, Dr. Rice has planned an exceedingly strenuous four years for his high school students. Four years in the medical college is the minimum and five years is now being advocated. The young physician certainly should have longer and better clinical training, and the didactic instruction should be

less declamatory and more practical. In this we certainly agree with Dr. Rice, and we agree with him that fitness to treat and cure the sick is the thing of greatest importance.

But we cannot join in the wholesale condemnation of our institutions indulged in by Mr. Flexner.—ED.]

TREATMENT OF DELIRIUM TREMENS

In the number of *Helpful Hints for the Busy Doctor* just received I note what Dr. C. E. Little has to say about the management of delirium tremens cases. Having had not a little experience in this direction, I will contribute my mite for the consideration of those who may be called to attend such a case.

If the patient is very obstreperous and terrified at the imaginary presence of snakes and horrid devils, I give of the sedative mixture described below 15 drops every half hour until his nausea (which usually is present) is controlled and he is more quiet. Then I give him a quart of milk punch (with rum or whisky) into which I stir a tablespoonful of capsicum and bid him drink of it *ad libitum*. By the time the punch is gone he will go to sleep and then sweat the rum out of his carcass until the apartment smells like a Bowery bar-room.

The sedative mixture, or drops, referred to is composed of equal parts of chloral hydrate and camphor, triturated together until they liquefy. The dose, as stated, is 15 drops.

I have administered these drops to noisy and turbulent insane patients to calm them, with prompt beneficial effects.

GEO. D. STANTON.

Stonington, Conn.

[The "sedative drops" described by Dr. Stanton are identical with the "camphorated chloral" described in the National Formulary, its principal use being externally to allay pain, especially of the trigeminus. Dr. Stanton fails to mention his mode of administration, but presumably gives it in milk or liquor. Water causing separation of the camphor, the dose must be tremendously nasty. An improvement would be to dissolve the camphorated chloral in three times its volume of glycerin, flavoring with

oil of peppermint or cinnamon, and to give one teaspoonful of this in milk or wine. However, might it not be preferable to dispense the powdered camphor in capsules (or tissue-paper ball) and give the chloral separately in appropriate solution? But why use this unpalatable and sometimes unsafe mixture (chloral given in spirits is the "knock-out drops" of the slums) when H-M-C will beautifully control the terrible excitement of acute alcoholism, and a quick clean-out can be effected (in suitable cases) with apomorphine and elaterin? Capsicum, however, is an excellent stimulant for "d. t." cases. This may be given in the form of capsicin. Aromatic spirit of ammonia, glonoin or strychnine may be needed as bracers, where there are signs of shock.—ED.]

A POCKET REFERENCE TO CAUSES OF DEATH

Every physician should write to the Bureau of Census, Washington, D. C., for a neat little pocket reference book, giving the carefully classified International List of Causes of Death. This booklet was prepared by Dr. Cressy L. Wilbur, chief statistician for vital statistics in the Bureau, and is designed to bring about preciseness and accuracy in the making of official reports of deaths. The booklet is sent free. Every physician should have a copy.

GRAFTING IN THE MEDICAL PROFESSION

The Chicago Daily News discusses editorially "the well authenticated reports of grafting" that have lately been presented against the medical profession. After giving its meed of praise to the hard-working, overburdened doctor, subject to calls at all hours of the day or night, yet entering the sickroom always wearing the smile of cheer and hope (who has been an object of sympathy as well as of gratitude), the editorial continues: "While not a little can be done to remedy grafting in the medical profession by limiting the products of the medical schools doubtless a great deal also can be done by the people themselves. Let them

demand character in their physicians as well as skill, and let them see that in both respects they get what they demand."

Exceedingly well said, oh Wisdom, and so simple. Has it ever occurred to the wise, but withal naive, editorial mind that it might be well to look at the reverse of the medal? After having "grafted" for centuries at the expense of the medical profession, the dear peepul must demand character in their physicians as well as skill and see that they get what they demand. Far be it from me to excuse the actual occurrence of graft, but its explanation does not constitute an excuse, and I submit that if graft exists at all in the profession, which perhaps has less black sheep among its fold than any other profession, bar none, the people have simply to thank themselves for its occurrence, and have merely the results of their own teachings and doings.

I maintain that from no class is graft levied in such an unblushing and shameless manner as from physicians; not occasionally, but constantly. For one man who calls promptly at his doctor's office and pays his bill for services received, ungrudgingly and in full, there are not nine, or nineteen, or forty-nine, no, there are ninety-nine—yes, nine hundred and ninety-nine—who not only let their physician wait for weeks, months and years before they pay his bill, but demand a "rake-off" as a reward for doing their simple duty. More, most of these "honest and grateful" people, who demand character in their physicians as well as skill, are exceedingly likely to suggest that the doctor's bill is so much money found, that it is not earned, that they are actually making a present to him of the amount; and they forget that not so long ago they would have been willing to pay ten times the amount down for the assurance that they would get well.

And still more: A great many people want and desire grafting *doctors*, as they prove by consulting the various advertising quacks and irregulars who operate under the no-cure-no-pay fake. To these gentry they give all their available cash, and then they demand from the regular physician not only the skill to cure them, but *the character to do it for nothing*.

What about the graft of the dear people who can well afford to pay for a physician's services and go to the dispensary, thus obtaining the value of money dishonestly and under false pretenses? What about the graft of the people who let the physician wait for his bills so that he must borrow money and then pay him short? What about the graft of the people who make the most unreasonable demands upon the time and the services of their physician and then blacken his character and his reputation?

Go to, Mr. Editor! The shoe fits on the other foot. The wonder is *not* that there is grafting in the medical profession; the wonder is that it is the rare exception, that it is not the rule. Instead of making unnecessary demands, let the people do their duty by their physicians, and we shall hear even less of graft than we do now.

H. J. A.

DESERVED HONOR TO A GOOD MAN

We are pleased, indeed, to learn that our old and dear friend, Dr. C. A. Bryce of Richmond, Virginia, editor and publisher of *The Southern Clinic*, has accepted the Chair of Electro-Therapeutics in the Maryland Medical College. Not only is Dr. Bryce to be congratulated, but the college is to be considered fortunate in securing his services. Best wishes, Brother Bryce!

DEATH OF DR. LANDON B. EDWARDS

It is with real sorrow that we announce the death of Dr. Landon B. Edwards, for many years the editor of *The Virginia Medical Semi-Monthly*, one of our most valued exchanges.

Dr. Edwards was born in 1845, was educated at the Lynchburg Military College and at Randolph-Macon College. He enlisted in the Confederate Army in 1863 and served until the close of the war. He then studied medicine in the Medical College of Virginia, the University of Virginia, and the University Medical College of New York City, graduating at the latter institution.

Dr. Edwards has had a distinguished medical career, having occupied many prominent positions. He was the founder of

The Virginia Medical Semi-Monthly. We know few men who will be missed more than he.

TO OUR ALKALOIDAL BROTHERS

There is a movement on foot to establish a large general hospital in China in connection with the missionary work now being carried on in the Celestial Empire; this has progressed to the extent of erecting the building and provision has already been made for the needs of a number of patients.

Dr. Anna Gloss, who has been in charge of the work, is now at home on a vacation, but she expects to return and take up the task again during the coming summer.

Dr. Gloss is professor of therapeutics in the native medical school and at the same time she is an expert alkaloidist. It is her aim and intent to establish an alkaloidal ward in the hospital mentioned above. She needs assistance in this work and we purpose to lend our aid in the very commendable work that she is trying to accomplish.

We shall be pleased to receive and acknowledge any donation that you may feel able to make, and we assure you that all donations will be religiously applied, and the names of those who so desire it will be placed upon a tablet in the ward when the work is fully completed.

Let us hear from you, Brothers, and be sure to contribute as liberally as you can. Address me personally.

W. C. ABBOTT.

Chicago, Ill.

DR. OSLER'S CHALLENGE ANSWERED

If I were so situated that I could accept Dr. Osler's challenge (see page 2, *CLINICAL MEDICINE*, January, 1911), I should gladly do so in order to demonstrate the truth about the value of vaccination. I should select the ten men who had been vaccinated from among those who eat much meat and use tea, coffee, tobacco, beer, wine and liquors; who lead inactive lives and consequently have a poisoned blood stream with the body full of accumulated waste matters, as is true of a large percentage of people—

this condition being the fundamental cause of much disease.

I should select the second ten, the *unvaccinated* persons (the individuals of both classes to be between fifteen and thirty years of age), from among vegetarians, or from those who eat very little meat and who do not use tea, coffee, tobacco, beer, wine or liquors of any kind, and who lead an active life—in other words, from those who have a pure blood stream, from a pure food supply, and *no failure* of elimination of waste matters.

To each of the latter ten persons (unvaccinated) I should give from 20 to 30 grains daily of pure, *freshly made* calcium sulphide, and I know from experience that *not any* of these ten unvaccinated persons (though thoroughly exposed) would contract smallpox in even the mildest form. Dear Brother Osler would not have any opportunity to arrange for funerals except for his own vaccinated friends.

L. A. MERRIAM.

Omaha, Neb.

[The late Dr. Coleman of Texas always insisted that yellow-fever and smallpox could be prevented by early and thorough saturation with calcium sulphide, and its value in the arrest of the exanthemata is a fact to whose verity thousands of able practitioners can testify. Read the report of the Syrian missionary, Dr. Clarence D. Ussher (see *The Medical Record*, and *CLINICAL MEDICINE*, November, 1909), telling how he put a stop to epidemics of typhus fever and scarlatina, before you scoff too much at Dr. Merriam's little article.—ED.]

EXPERIENCE WITH "606" (SALVARSAN)

The interest in Prof. Ehrlich's new remedy for syphilis, "606," or as it is now known, "salvarsan," continues to be very great. That it is a remarkable discovery there can be no question, but already there is a growing sentiment that this powerful arsenic preparation has dangers and disadvantages which were not foreseen when it was first presented to the profession, and that for the present it should be used with extreme care, in well-selected cases, and only by men

who have special facilities and training for treating cases of this character. Furthermore, it now seems probable that it will not prove so universally curative as it first promised to be. Something of the changing attitude, as mirrored in the mind of a general practitioner of unusual intelligence, who has investigated salvarsan personally, is set forth in the correspondence that follows:

—, FLORIDA, Dec. 15, 1910.

DEAR DOCTOR ABBOTT: I have been reading, with much interest, articles both in medical journals and literary magazines relative to Prof. Ehrlich's new remedy for the cure of syphilis, i. e., "606."

On page 1037 of October CLINICAL MEDICINE is an article from your pen regarding this treatment. In this article you stated that the remedy was not then on the market. I have since learned that it now is, and that it has been tried, with success, in several hospitals in this country. I see mentioned elsewhere that the October 13, 1910, issue of the *Deutsche Medizinische Wochenschrift* is devoted entirely to papers on this remedy which were read before a convention of German scientists and physicians on September 20 last.

Now, Doctor, in view of these facts, I am exceedingly anxious to learn more about this new remedy, the technic for its use, etc., in order to be able to give relief to my suffering neighbors, and in one case in particular, that of an innocent wife who is now showing ulcerating tertiary lesions that have not responded to mercury and iodide.

Dear Doctor, will you help me secure a few doses of the remedy and to learn the technic of administration? Secure for me a copy of the German journal or a translation thereof and draw on me for the cost. Words will not express my appreciation and I shall always remain your most obedient servant

Fraternally yours,

We replied to the doctor's letter as follows:

CHICAGO, ILL., Dec. 20, 1910.

MY DEAR DOCTOR: I am just in receipt of your letter of December 15, relative to Ehrlich's "606." This remedy is not yet on the market, but we are informed that it will be offered for sale after January 1. The American agents are Victor Koechl & Co., 34 Beach Street, New York. If you will write them, they can give you information concerning the remedy, including prices, etc.

The "606" thus far used in America is from supplies furnished free by Prof. Ehrlich to prominent medical institutions, like the Rockefeller Institute, and to a few eminent specialists in the principal large cities. Let me suggest that if you desire information concerning the remedy and its use, you secure from Rebman Company, New York City, one or more of the three books which they have recently issued concerning it—one by Ehrlich himself, another by Wechselmann, and the third by Bresler. I doubt if you can secure a copy of the *Deutsche Medizinische Wochenschrift* for October 13, 1910, in America. You might write to G. E. Stechert, 155 West 25th St., New York City, who supplies foreign books and journals.

Don't make the mistake, Doctor, of going too fast with "606." You will find considerable information concerning it in the January number of CLINICAL MEDICINE, both in favor of and against it. In this number there is an article by Dr. B. C. Corbus, who went to Frankfort and interviewed Ehrlich himself. With kind personal regards, I remain

Sincerely yours,

W. C. ABBOTT.

The reply to this letter reached us some time later, from Philadelphia, where the doctor had gone to study the action of "606" at first hand. It follows:

PHILADELPHIA, PA., Jan. 5, 1911.

DEAR DOCTOR ABBOTT: Your reply to my recent letter reached me on the eve of my departure from Florida to Philadelphia, to which latter place I have come to investigate and study the results from experiments with and administration of "salvarsan."

I count myself very fortunate to have fallen in with Dr. Judson Daland, one of the sixteen physicians in North America to whom Prof. Ehrlich sent his remedy for test purposes. Dr. Daland also spent several months in Germany last summer, studying the technic and watching the results of this new drug.

I appreciate your timely advice, Doctor, and see now since I have witnessed the administration of "606" that you were correct in advising, "Don't go too fast." I feel that this personal warning may be insufficient, for there are undoubtedly many others who thought as I did about "606"—that all that was necessary was to secure the remedy, diagnose syphilis, have the patient come to the office, "shoot" him and tell him he was cured. Far from it! To carry out the technic of its proper use is practically impossible outside of a well-equipped hospital, for the preparation both of patient and drug must be under the strictest aseptic precautions, and the patient should be put to bed under the watchful care of a trained attendant. Too much stress cannot be laid on this, for here in Philadelphia serious consequences have already followed faulty technic, and for the country practitioner to attempt to use salvarsan without being thoroughly trained in its administration and knowing its dangers will surely bring harmful results and injury to the experimental progress with the remedy.

We have a new chemical compound most sensitive to many changes that in some instances has caused poisoning. It should be handled only by experts until the technic and dose have been fully determined upon.

With those to whom I have spoken it appears of vital importance that the profession be forewarned of the danger of the untrained use of this remedy. The technic is far from being perfected, having changed now as many times as there are months since it has been used in America.

I trust you will sufficiently see the importance of this to sound the warning note editorially.

I thank you for past courtesies and hope at some future day to give you my experience with salvarsan.

Sincerely yours,

Our advice to readers of CLINICAL MEDICINE, then, as it was to this good brother, is to

"go slow." We hope that salvarsan may prove to be all that has been expected of it by its most sanguine supporters. If a specific is found for this terrible disease, its economic significance, the bearing it may have upon the world's future, is almost beyond conception. More than that—it is a prophecy of future triumphs over disease, not only those of protozoan origin, but also perhaps over those due to bacterial infection, and over their more or less remote results.

But while we look eagerly for the victory it isn't wise to anticipate it. The great investigators, the workers in this special field, these must first work out the details; and we can be the more content to await patiently the results of their work since we already have remedies for syphilis which we know to be efficient, yes, curative, in the vast majority of cases, and which we know how to use. We can still depend upon mercury—the protoiodide, biniodide, and bichloride; upon iodine, as iodide, iodoform, calx iodata; upon the vegetable alteratives, especially phytolaccin; not forgetting the value of nuclein, of arsenic and of iron. Yes, there are few diseases in which we have so many effective remedies as in syphilis, even if we must wait a while before making "assurance doubly sure" with regard to the merits of "606."

It has come to our attention that quacks are already advertising "606" to the laity, through the *Chicago Examiner*. They state that "one dose cures" and that "Salvarsan can be taken in the privacy of the home." It is offered to laymen at \$30 a dose, the trade price being \$3.50. How these quacks secured stocks of the drug is not explained.

THE MEDICAL PROFESSION MUST CHANGE ITS TACTICS

He who is not a frequent visitor to radical clubs, does not come in contact with newspaper men, with "new-thoughters," etc., and does not read regularly the numerous naturopathic, health-culture and physical-culture and other allegedly advanced publications, can have no idea how the medical profession is ridiculed, how it is maligned, how it is lied about, how it is misrepres-

sented, how it is "knocked" on every possible occasion.

We are pictured as ignoramuses, grafters, butchers, anxious to operate whether there is a necessity or not, drug dopers, etc., etc. We are denounced as a trust, a monopoly, and any attempt of ours to organize, to pass laws protecting the public health is characterized as an attempt at class legislation, a desire for special privileges, inspired by our fear of competition, by our fear of the superior skill of our irregular rivals.

And the average physician who has not given the matter any thought has no idea what effect these unceasing slanders and persistent lies have on the public mind, how suspiciously a large part of the public is beginning to look at the medical profession, how we are losing the confidence of the people, how the ground is slipping from under our feet.

As an illustration, we need only mention the reception that has been accorded to the suggestion of a Federal Department of Health. The motives that actuate us and the objects of such a department were at once misrepresented, the people were made to believe that their freedom to choose a medical adviser was threatened, the forces of reaction and obscurantism, masquerading in some instances under the guise of liberalism, were quickly marshalled, and in a short time a society was organized which now claims a membership of one hundred and fifty thousand.

We physicians are ourselves to blame. When the irregular, fantastic and pernicious cults began to make their appearance, we paid no attention to them. We thought they amounted to nothing and would soon dry up and shrivel away of themselves. When the malicious attacks began to appear in the various quack publications, we remained silent. We considered it *infra dignitatem* to pay attention to them, and we thought that the public would have no difficulty in seeing through their falsity and meretriciousness.

Our long and patient inactivity has been due to the false idea that the truth will always triumph and error is bound to die. Yes, eventually. But if error is allowed to grow and spread unhampered, while those who

see the truth will not take the trouble to proclaim it and expose the error, then it may take centuries before the correctness of the truth and the falsity of the error will be perceived.

In this as in every line of human activity prevention is immeasurably superior to cure, and the right way to fight is not to permit it to get a firm foothold. Error and superstition are hard things to uproot after they have attained the dignity of a universal belief.

It is time for the medical profession to change its tactics and assume a wide-awake, militant attitude. It is time for us to attack error actively wherever it shows its head. By reading papers before lay audiences, by participating in discussions, by writing to the newspapers, by refuting the false arguments of the false prophets wherever they appear, we can do much toward destroying the influence of the quacks and the irregular cults. In short, we must throw off our exclusiveness, we must go out to the public and take it into our confidence.

The truth is with us—that we know; only we must not hide it under a bushel and expect that its light will, without any effort on our part, penetrate into the darkest recesses of ignorance and quackery.

WM. J. ROBINSON.

New York City.

[How well Dr. Robinson is practising what he preaches is shown by his magnificent address on "Scientific Medicine Versus Quackery," the first installment of which is printed in this issue. Others can and should carry this work forward, not in one way only but in many ways. If it is not convenient or expedient for you to write or speak publicly you can at least help circulate Dr. Robinson's address. Read the editorial on this subject, this issue.—ED.]

THAT "CLEAN-OUT" SLOGAN, IS IT NEEDED?

I have taken CLINICAL MEDICINE for several years and read every issue as thoroughly as time will permit, but I believe that the last number (December) is the most helpful one to the general practitioner that

you have ever published. For the general practitioner in the country, meeting bare facts and conditions of all kinds, and alone, I do not believe there is anything published containing more information and inspiration for better, more thorough and precise work than your journal.

Your constant "clean-up-and-keep-clean" slogan may get monotonous and many may scoff at the constancy of your admonition of an idea shared so commonly by so many; yet, it is a good thing to be drummed into the ears of those of us who believe in it, that we may be still more thorough in our early elimination of toxins in disease, and it is also good to make the noise so loud that the skeptical doctor will be unable to get away from it; perhaps after trying "the experiment" (perhaps secretly) he will join with us in our beliefs.

I remember a case I attended three or four years ago to which I was called where another physician (one who has no use for "clean out, clean up and keep clean") had been treating the case, calling upon her twice a day for nearly two weeks. The husband became discouraged because of no improvement, and he was discharged. I took the case. I made a call, one afternoon, and the next morning the husband informed me at my office that he didn't think it necessary for me to come again. I thought I had "got mine" too, but was somewhat relieved when he added: "My wife is so much better I don't believe it is necessary." Two grains of calomel and one of podophyllin in divided doses followed by two or three doses of saline laxative, at intervals of an hour, "cured" a case of "gastric fever" of two weeks' duration.

Just a word as to the use of sulphocarbolates. I recently had a very severe case of dyspepsia, attended with severe flatulency. Patient had been troubled for five years. I treated her with remedies I usually employ, among them creosote. After two weeks the patient seemed no better. I decided to try some sulphocarbolates. The patient immediately began to improve and has been free from any gastric trouble since.

EARL H. FOUST.

Brooklyn, Mich.

[I hope every reader will keep that "dyspepsia" suggestion in mind. It's a good one.—ED.]

PURULENT OTITIS

Especially in the remote country regions, a general practitioner frequently has to do more or less work which more properly belongs to the domain of the specialist, and in this connection, I will in brief outline from my own experience a few points concerning the treatment of purulent otitis and describe two cases of mine which have occurred during the year just past.

Last winter, while I was in a reservation in western Nevada, in the United States Indian Service, I was called upon to attend to the case of a little girl, only a little over one year old, in the family of one of the Indian-Service employees. As there was no specialist in diseases of the ear nearer than Reno, 112 miles away, and the treatment of that case being a part of my duties to Uncle Sam, it naturally devolved upon me to go ahead and do my best.

I immediately began giving my little patient 1-6 grain of calcium sulphide every hour during the day and a 2-drop tablet of nuclein solution from three to six times a day. Knowing the value of iodine in suppurative diseases in general, I used as an irrigation a dilute solution of tincture of iodine in warm water in such a strength as to give a pale-yellow color to the solution. That treatment was continued two or three times a day until I was satisfied that there had been sufficient disintegration of the tissues to get rid of the effete material and that further use of the iodine in this way would be contraindicated. After that, other irrigations were used instead, such as a dilute solution of the compound solution of cresol, a 1 in 200 solution of picric acid or a 1 in 1000 solution of potassium permanganate.

Following the use of irrigations, I applied through a powder-blower (after wiping the interior of the meatus with dry absorbent cotton) at first salicylic acid and later on boric acid. After this local treatment, the patient's ears were plugged with absorbent cotton.

Of course it goes without saying that all through this treatment strict attention must be paid to the action of the bowels. In the case of small and unruly children, it is just about impossible to use Politzer inflation of the middle ear, and we must do our best to get along without this valuable assistance; also it frequently is impossible to get a young child to hold still enough to use the head mirror and ear speculum. A general practitioner away from a specialist must use his own inventive ingenuity in such cases as this. Well, the patient made an uneventful recovery without the least threat of the trouble extending to the mastoid cells.

The second case of this kind occurred in Pueblo, Colorado, only a short time ago. This patient was a very unruly boy, six years of age, with a running from one ear, the trouble having started with a tonsillitis. With the help of his father, I with difficulty managed to apply tincture of iodine to the boy's inflamed tonsils. As he had something of a fever, I put up for him aconitine, pilocarpine nitrate and strychnine arsenate in appropriate doses for his age, pilocarpine having a tendency to help loosen any false membrane that might be attached to the tonsils or pharynx, as well as assisting the aconitine in the reduction of the fever. The next day the fever was gone and the swelling of the tonsils greatly reduced.

I then had the patient take two of the 1-6-grain granules of calcium sulphide every hour and a 2-drop tablet of nuclein every three hours, and later on every two hours. Also I had the patient take instead of two of the 1-6-grain granules of calcium sulphide one of the 1-2-grain pills of the same drug till he had taken in the course of the day ten of the latter. Having just seen in the December, 1910, number of THE AMERICAN JOURNAL OF CLINICAL MEDICINE, under the heading of Therapeutic Notes, that formin was useful in running ears, I determined to try that remedy here in conjunction with calcium sulphide and nuclein. Having in my possession some formin compound, each tablet of which contains 3 grains of formin, 1-2 grain of arbutin and 3 grains of ammonium benzoate, and knowing that the arbutin and ammonium benzoate were tonics to any mucous membrane and that the formin

was excreted at the site of infection, I gave the child these tablets, a half tablet in water to be taken every three hours, giving him phenolax wafers as needed to keep his bowels open.

As to the local treatment, I concluded that for ear work, tincture of iodine, though greatly diluted, was as a whole too energetic in its action to use as a routine measure in the irrigation of the meatus. The solution that I depended on in this case was one of the intestinal antiseptic tablets dissolved in about six ounces of warm water. This contains five grains of the combined sulphocarbates of zinc, lime and soda, with a small amount of bismuth salicylate. The zinc and the bismuth also have the advan-

general practitioner to attempt that which he has not the skill nor the appliances for successfully performing; but by a little forethought, the country doctor can in many instances cure up his cases of middle-ear disease and consequently have no need of invoking the aid of the specialist.

FRANK D. PATTERSON.

Pueblo, Colo.

PNEUMONIA? IF NOT, WHAT WAS IT?

I will write you my experience with a recent case:

The patient was Miss T., age 16 years. December 14, 1910, she was taken with a chill followed by a high temperature, 105° F. The temperature was taken by the parents. December 16 there was continuous high temperature, ranging from 104° to 105° F. December 17 I was called to see the patient at 9 a. m., and the temperature was 104° F.; cough severe, excessive amount of brick-dust sputum, severe pleuritic pain on the left side, upper lobe of left lung consolidated, and bronchial breathing.

The treatment was as follows: A cotton jacket was applied; calomel, podophyllin and bilein compound was administered and followed by a laxative saline; the defervescent compound was then given in small doses, frequently repeated, to effect, and this effect maintained by its use.

December 18, in the morning, the temperature was 101° F.; sputum free from blood; at 12 [midnight?] the temperature was 98.6° F. and remained so, the patient convalescing nicely.

In this particular case the clinical findings were so pronounced (chill, temperature, pleuritic pains, brick-dust sputum, and signs of consolidation of lung) that there could be no excuse for error.

You will note the symptoms all cleared up after forty-eight hours of treatment, following



Dr. M. W. Phillips, Chapman Quarries, Pa., in his "cozy cab"

tage of being mildly astringent. Once, in order to loosen a bunch of dried pus, I cautiously ventured to put a few drops of the peroxide of hydrogen into the above solution. However, if used at all, the peroxide in such cases should be used with extreme caution and not as a matter of routine, on account of the danger of spreading the infection into the mastoid cells. After this irrigation with the solution of the sulphocarbates, which I had directed to be attended to several times a day, the meatus was carefully wiped out with dry absorbent cotton and boric acid blown in with a powder-blower and then packed with absorbent cotton. Under the above treatment, this patient made an uneventful recovery.

My object in writing this article is not by any means that of trying to encourage the

forty-eight hours' sickness during which he had *no* treatment.

What is your diagnosis, Brothers?

B. D. BROWN.

Apache, Okla.

[Say it! And, by the way, when *you* have a case of pneumonia, I would suggest that you try some of the remedies recommended by Dr. Brown, reading again the articles by Drs. Shaller and Bailey in last month's CLINICAL MEDICINE. The "clean-out," sulphocarbolates, the defervescent in the sthenic stage, the "trinity" in the asthenic, bryonin for the pleurisy-pains, nuclein as a stimulant of vital resistance, codeine or heroin for cough, emetin to "loosen", a chest protector, a light diet, and eternal watchfulness—these mean *quick* cures of pneumonia.—ED.]

TOBACCO HEADACHE

I have found a number of times that patients who suffer from headache due to excessive tobacco smoking, usually of cigars or cigarettes, are benefited, and the headaches dissipated by giving gelseminine, gr. 1-250 every hour. I have used it several times for this purpose, every time successfully.

WM. E. GIESREGEN

W. Philadelphia, Pa.

ALBRIGHT'S OFFICE PRACTITIONER

We notice that *Albright's Office Practitioner* has been combined with *The Physicians Drug News*, and we think the combination a good one. Both journals were devoted, in a considerable degree, to the business side of practice, and have proven of great value. Together they will undoubtedly increase their sphere of influence, and thereby their interest. We are pleased to note that Dr. Albright will serve the *News* editorially. We offer our best wishes.

ATROPINE USED IN HEMORRHAGE

In a recent letter you asked me if I had any cases illustrating the value of atropine in hemorrhage. I have had one case that is conclusive on that point, so far as one case

will go. I have had others which I will look up later.

A doctor, a friend of mine, was troubled with a growth on one of the turbinates which caused a most troublesome cough. At last he determined to have it removed. For



Dr. F. E. McCann, Augusta, Mont., making a call and bringing home a "sheep"

this purpose he went to a city some distance away to the man he considered the best operator for this work. The growth was removed and after some time and trouble the hemorrhage was stopped and he started by train for home, some 70 miles away. On the journey back the bleeding started again and continued after he got home, in spite of all that several physicians tried.

This went on for over thirty hours, when, becoming alarmed, he went to the depot to take a train to the physician who had operated on him, but on getting on board the train he fell down in a dead faint, and they had to take him home in a hack. The condition was becoming desperate and his wife came to me and asked me to go and see him. There were certain reasons why I was reluctant to do this, but on her fully explaining the state of the case, I went.

I found the man almost pulseless, unable to stand, and the bleeding going steadily on. I told him what I was going to do, and he whispered so low I could hardly make out what he said: "I have never had a hypodermic injection." I gave him a little whisky and water and then injected 1-50 of a grain of atropine sulphate into his arm. After a few minutes he whispered: "Not a drop of blood since you gave me that in-



Dr. A. Field, Stonington, Ill., ready for a long, cold drive

jection," and from that time on there was not the slightest hemorrhage.

This was a grand success for atropine, as he was nearly gone and could not have lasted much longer. As it was, it took him more than four weeks to get over the loss of blood.

HENEAGE GIBBES.

Detroit, Mich.

EXPERIENCES WITH PELLAGRA

I have just read the articles in the December number of *THE CLINIC* on pellagra, by

Dr. Bowling and Dr. Torbett, with considerable interest, and I beg to contribute a little experience of my own on the same subject.

I treated three typical cases during the past spring and summer. Two of them were white women and one was a colored woman. These three cases are the sum total of my pellagra experience, and unlike Dr. Bowling and Dr. Torbett, I recognized my first case, or, in other words, pellagra has not made its appearance in this neighborhood till the present year.

I made it a point right in the beginning of the pellagra "talk" to visit one of our public hospitals where they had a score or more of authentic cases, and I decided then that I had never seen a case before. I agree with the editorial note that a great many cases of pellagra look in many respects like sprue.

I began the treatment in all my cases with small doses of calomel and podophyllin, and followed with laxative salines. The calomel and podophyllin were repeated once or twice a week, but the salines once or twice a day, and the sulphocarbolates were pushed, giving as much as two tablets every two hours till effect.

In my first case I gave chlorine water, but gave it in teaspoonful doses every four hours instead of every two hours as does Dr. Bowling, and as for the salines and sulphocarbolates, I was never able to get a satisfactory amount down the patient, owing largely to the poor nursing facilities. In this case I did not give arsenic. The patient died after an illness of four or five weeks.

In the other two cases I was able to push the salines and sulphocarbolates "to effect," used ordinary doses of Fowler's solution and good large doses of subnitrate of bismuth with finely powdered chlorate of potassium, taken in the mouth without water and slowly swallowed. These patients improved rapidly and have been apparently well for several months.

There is one symptom of pellagra which, so far as my literature on the subject goes, is not mentioned, and it is this: In the negro the pigmentation of the skin in the surfaces that have had the eczematous eruption is always much darker—often approaching

black. A darker discoloration than the surrounding skin is to be expected, and it often continues after all inflammatory and squamous stages have disappeared.

A. GRAVES.

Leighton, Ala.

[This report again verifies our "suspicion" that intestinal cleanliness—antiseptics—is a most important—the most important—factor in the treatment of these cases.—ED.]

THE WHITE-SLAVE TRAFFIC

The articles published about the social evil in the last few numbers of *CLINICAL MEDICINE* have attracted a good deal of attention, among others that of Mr. Arthur Burrage Farwell, president of the Chicago Law and Order League, who sends us a number of pamphlets telling of the work of the League along the line of sex education (as suggested editorially in our journal) and in particularly combating the white-slave traffic. Some of these pamphlets tell how young women are lured to destruction, and many of them emphasize the absolute necessity of awaking (and educating) the entire public to the importance of this great sex problem.

THE TREATMENT OF EPISTAXIS

One reads in almost every medical journal of remedies for the treatment of epistaxis, and the number of different remedies suggested indicates what a common condition it is. I have never yet seen a treatment promising a permanent cure.

Epistaxis occurs most commonly among young boys and girls about the age of puberty, and among young women markedly anemic from indoor occupations, i. e., stenographers, clerks in stores, etc. A careful examination of the nasal mucous membrane in the great majority of cases will disclose a minute ulcer, usually on the septum nasi, but it may be elsewhere.

My own practice is to swab the membrane very gently with a warm saturated solution of boric acid, then to apply to it a pledget of absorbent cotton, saturated with full-strength adrenalin solution, 1 in 1000.

This is left *in situ* for about five minutes, then a second pledget dusted with novocaine is left in the nose for another five minutes. Then under a good electric headlight I proceed to cauterize the whole surface of the ulcer with an electric cautery, carefully and very lightly, as a burn through the septum would be undesirable, to say the least.



From "The California Desert", sent by Dr. H. L. Coffman, Palm Springs

A little powdered boric acid blown on with an insufflator soon arrests any little bleeding, and that is the end of epistaxis for that patient. Proper internal medication for anemia, when present, should of course be given.

HUGH JAMESON.

Titusville, Pa.

MEASLES, SCARLET-FEVER, MUMPS, SMALLPOX

These diseases seem to be prevailing generally in all parts of the country. Under the circumstances it seems timely to suggest

that there is one remedy of the utmost value in all of them. I mean calcium sulphide. Every patient suffering from any of these three diseases should be simply *soaked full* of this not too pleasantly-smelling substance. After all, though the odor isn't of the nicest, it isn't bad to take and seldom disagrees with the stomach, even of an infant. Give the 1-6-grain granules, from one to six at a dose, and from every hour to every three hours, according to necessity. Go after the "breath reaction." Remarkable results have followed the use of calcium sulphide, *when good*, in the experience of many physicians. We should like to have the reports of a large number of physicians with this remedy in the contagious diseases, for publication during the next two or three months.

Of course calcium sulphide is not the only remedy of value in measles, scarlet-fever, mumps and smallpox, though it is perhaps the most valuable. Thorough cleaning out of the bowels and disinfection with the sulphocarbols; the use of the small, frequently repeated dose of aconitine, perhaps guarded by brucine or strychnine arsenate; atropine or pilocarpine if the eruption is delayed; veratrine, copious bland fluid alimentation and hot baths if elimination is imperfect; nuclein if the defensive forces are weak—nearly always nuclein as a matter of fact; inunctions with a bland antiseptic ointment, especially in scarlet-fever, or perhaps mercury bichloride sponging in smallpox—all these remedies, and more, will be thought of by the discriminating physician.

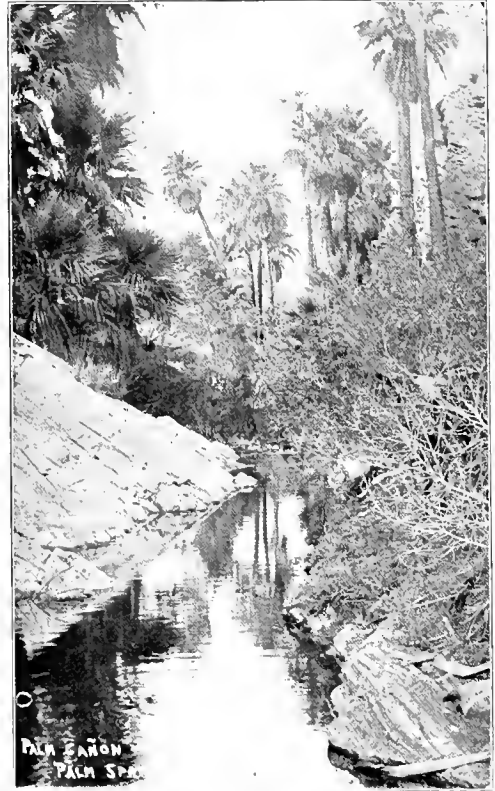
Let's talk all these things over—not forgetting your experience with calcium sulphide. Everyone! Next two months.

WAS IT ACUTE ANTERIOR POLIO-MYELITIS?

I was called about midnight to see a six-year-old boy. The child had been in convulsions off and on for several days, and had been treated by another physician with chloral and bromidia. Cramps, vomiting, stupor, pain in the back, joints and limbs, with a fever of 102° F., presented themselves to my view. As scarlet-fever was then prevalent, the attending physician had pro-

nounced the case probably one of that disease, and the house was placarded accordingly. His efforts to relieve the boy (who like his parents is of a nervous constitution) seemed to fail.

As the doctor had a call into the country he requested me to go and see the case.



Making the desert bloom, sent by Dr. H. L. Coffman, Palm Springs, Cal.

A short examination decided me to give a rectal injection of soapsuds. Well, the result simply astonished us all. The first discharge was a 25-inch long, solid, dark-colored string of soft feces, which shot out like an arrow from a bow; then came a copious discharge of offensive gas. After this the boy seemed to feel easier. About half an hour later slight convulsions started again, but a dose or two of hyoscyamine had the desired effect of controlling them. I gave the patient at once small doses of calomel and podophyllin, and ordered saline laxative to be given in the morning.

When I called again, the next morning, I found, beside a dull pain in the legs and

joints, what seemed to me a paralytic condition, also a similar condition in one arm. Not daring to frighten the family by diagnosing infantile paralysis, cases of which had just previously been in town, I simply told them that there was certainly no scarlatina, but would not yet diagnose the case, but decided to treat symptoms only as they arose, which arrangement suited the family perfectly. I happened to have some unguentum Credé which I had bought for another case, and after using it first myself, to show the way of the application, I directed it to be used every six hours—though afterward I was compelled to rub it in myself, since both father and mother were too excited to do anything.

Having just had my attention called to the curative properties of chromium sulphate which by the way I have so far found to do all that is claimed for it, and more beside—of which I hope to be able to give you an inkling later), I gave the patient one-fourth of a 4-grain tablet four times daily. Triple arsenates with nuclein, and lecithin later on, rounded up the treatment, and in less than three weeks I had a sound and well boy. Asepsis of the bowels was sought by the use of the sulphocarbolates.

Now arises the question, was this an acute anterior poliomyelitis, and if so, was my treatment proper and scientific? At any rate I know it was decidedly effective and gave satisfaction.

C. K.

—, Kansas.

[It is impossible to state definitely from the doctor's report whether this case was or was not one of infantile paralysis, but the association of fever with pain in the back and limbs and the *probable* temporary paralysis suggest it strongly. Unfortunately, the doctor gives us no history of how long the apparent paralysis persisted. On the other hand, intestinal toxemia may give rise to stupor, nervous twitching, convulsions and an eruption that closely simulate that of scarlatina—and the enormous fecal accumu-

lation in this case suggests that a goodly share of the trouble may have been in the bowel, whatever else may have been the matter. At any rate, the doctor's treatment was symptomatically good.

We shall be on the lookout for that report of experience with chromium sulphate. —Ed.]

POST AND HIS PRODUCTS

Doubtless most of our readers have seen something of the controversy between C. W. Post of Battle Creek (the maker of grape nuts and postum cereal) and *Collier's Weekly*.

It is not our purpose to enter into this discussion, which has already become decidedly acrimonious. It seems, however,



Dr. I. P. Israel and family, Bluff City, Ark.

that Mr. Post's advertising *has* had in it too much of the medical character—there has been too much of the suggestion that his excellent foods are curative for certain diseases.

In this particular it is open to criticism. But, even admitting this, I can not believe that his presentation has done any very serious injury to anybody. Persons who are suffering the pains of appendicitis will none of them go to a diet of grape nuts as a panacea; while, on the other hand, the constant advocacy of a simpler, more abstemious dietary must have had a good hygienic effect upon the thousands of people who have been accustomed to habitual excesses and indiscretions in eating and drinking.

Then, perhaps, no one has done more than Post to point out the dangers (sometimes in an exaggerated way, possibly) of excessive coffee drinking; and it is likely that thousands have been benefited by turning from this stimulant beverage to the absolutely harmless cereal drink, postum.

On the whole it strikes me that Post's advertising misdemeanors are more than balanced by the positive good that he has done; and *he makes good foods*.

In the flood of criticism, this fact, the most important of all, has been kept very much in the background. I am very glad to speak well of his products, which I believe deserve the commendation of the medical profession.

As for Mr. Post himself, I would say that I know him personally and have found him a clean, earnest, enthusiastic man. Like other enthusiastic men, he sometimes makes mistakes—but what man of this kind does not. I do, but this, my position, *I believe*, is not one of them.

ADE'S BACILLIAN LYRIC

At a recent Chicago "function," Mr. George Ade, the well-known humorist, dramatist and Indiana agriculturist, enlivened the proceedings by presenting the verse here given:

A lovelorn microbe met by chance,
At a swagger bacterial dance,
A proud bacillian belle, and she
Was first of the animalcula;
Of organisms saccharine
She was the protoplasmic queen,
The microscopic pride and pet
Of the biologic smartest set.
And so this infinitesimal swain
Evolved this pleading, low refrain:

"Oh, lovely metamorphic germ,
What futile scientific term
Can well describe your many charms?
Come to these embryonic arms,
Then hie you to my cellular home
And be my little diatome."

His epithelium beamed with love;
He swore by molecules above
She'd be his own gregarious mate
Or else he would disintegrate.
This amorous mite of a parasite
Pursued the germlet day and night

And 'neath her window often played
This Darwin-Huxley serenade:

"Oh, most primordial type of spore,
I never met your like before;
And, though a microbe has no heart,
From you, sweet germ, I'll never part.
We'll sit beneath some fungus growth
'Till dissolution claims us both."

Since our readers will surely want to know how this romantic courtship came out, CLINICAL MEDICINE'S poetaster proceeds to complete the heart-rending story:

But the bacillian belle, in a pus-tube sweet,
Had been won by a gallant spirochete,
Who had traveled far and knew love's game—
So she spurned the pestilential swain:
"Go, quaff a draft of '606'
And chase yourself to the splenic Styx.
You're as tame as barnyard aspergillus;
Go hunt your ma, Mr. Bill Bacillus."

* * *

It's the bold bad man who wins the dame;
If you stick round home—then "Mud" 's your name.

Any further comments, anybody?

A SUIT AGAINST THE AMERICAN MEDICAL ASSOCIATION

The following, clipped from a Chicago newspaper, January 6, 1911, will doubtless be of interest to members of the medical profession:

Mandamus proceedings to compel State's Attorney Wayman to begin quo warranto proceedings against the board of trustees of the American Medical Association were begun yesterday when a suit was filed in the Circuit Court by attorneys representing Dr. G. Frank Lydston, member of the Association. Dr. Lydston seeks to have the trustees removed, alleging that they are acting illegally, and sets up in his petition that State's Attorney Wayman has refused to sign a petition for leave to file an information in quo warranto, which is necessary before proceedings can be started.

Dr. Lydston alleges that the Association has been operated as a corporation, autocratic and despotic, and "is not a real expression of the voice of the rank and file of its membership."

Dr. Lydston's statement in regard to the suit is as follows: "The American Medical Association is governed by the votes of men who are not legally entitled to a voice in its management. The Association has been doing business illegally for ten years, its elections being held outside of the state. This is contrary to law. My general fight is to obtain a democratic government for the Association which will conserve the rights of its members, take the management from the hands of a selected few and place it in the hands of the members, where it belongs."



CLINICAL MEDICINE POST-GRADUATE SCHOOL OF THERAPEUTICS

George F. Butler, A. M., M. D., Director
Thomas J. Mays, M. D.
C. S. Nelwanger, M. D.

C. E. de M. Sajous, M. D.
William F. Waugh, A. M., M. D.
Alfred S. Burdick, A. B., M. D.

PART III—LESSON SEVENTEEN

GASTRIC ULCER AND GASTRALGIA

THE TREATMENT OF GASTRIC ULCER

The treatment of ulcer of the stomach will vary with the stage of the lesion and the symptoms that may be presented. The objects to be fulfilled are the healing of the ulcer, the avoidance of all irritating agents, and the relief of troublesome symptoms. This end is best obtained by rest not only of the stomach but also of the body generally.

The Rest Cure.—This treatment, known as the treatment by rest or rest cure, first recommended by English physicians and lately by Leube, is to be carried out in a systematic manner. Rest of the body is best effected by assuming the recumbent posture, rest of the stomach by feeding the patient entirely by nutritive enemas. But as this latter is only possible for a short time, food when administered by the mouth should be easily digestible and not irritating. This dietetic treatment is further helped by the administration of alkalis, to diminish the hyperacidity of the gastric juice, and by the application of hot fomentations to the epigastric region.

The class of treatment in by far the largest number of cases resolves itself into this: The patient will remain in bed for some weeks, in fact until the acute symptoms have subsided. Hot fomentations are to be applied to the epigastric region; or instead of poultices, the stomach-capsules first intro-

duced by Leube. This contrivance consists of a tinned capsule so shaped as to fit the epigastric region. For use, it is filled with hot water. It has a metallic ring on each side so that it can be easily fastened so that it may be worn even when the patient is about.

Nutritive Rectal Enemas.—To give the stomach complete rest, some have recommended feeding by enemas exclusively, but it is scarcely advisable to treat all cases in this manner without distinction, nor is it possible to carry out this treatment for a long time without bringing on inanition.

Exclusive rectal feeding is indicated when vomiting of ingesta is persistent, when eating of food causes great pain, when there is hemorrhage from the stomach, and when perforation has occurred or appears to be threatening. But even in these cases exclusive rectal feeding rarely need be prolonged beyond a week or two weeks. The patient may take nothing by mouth except small pieces of ice or small quantities of water just sufficient to quench the thirst.

For the rectal feeding many physicians recommend artificially digested foods, such as peptonized milk gruel and peptone suppositories. Many, however, prefer to give enemas of beef tea and raw eggs with a little brandy, in all about two to three ounces. The peptonized food is more readily absorbed, but the observations of Ewald show

that ordinary enemas of eggs act equally as well and are quite as well absorbed. Peptonized suppositories sometimes irritate the bowels or are not well retained, and unless recently prepared, are sometimes passed out again unaltered.

Before giving the nutritive injection, the rectum should be emptied by one of water. The nutritive enema may be given every four to six hours.

Milk gruel for enemas is prepared by mixing 10 ounces each of rich milk and thick gruel, and to this 2 teaspoonfuls of liquor pancreaticus, and 30 grains of sodium bicarbonate are added. To increase the nutritive value, an egg may be added before the addition of the pancreatic essence. Peptone suppositories weigh about 60 grains and contain between 40 and 60 percent of peptone.

Dietary in Gastric Ulcer.—Milk occupies the first place in the dietary, its advantages being that it is alkaline, lessens the acidity of the gastric juice, and it does not irritate the mucous membrane either mechanically or chemically, it does not call forth vigorous peristaltic movements of the stomach, nor does it remain long in the stomach. Not more than 4 to 6 ounces of milk should be taken at once, and in twenty-four hours altogether three to four pints should be consumed. The milk, which ought to have been well boiled, may be taken warm or cold. When it produces acidity, an alkali such as sodium carbonate may be added.

If plain milk is not well borne, peptonized milk may be tried instead. In some cases milk in any form is not tolerated, and if so, then, besides rectal feeding, freshly extracted beef juice may be given a trial. In some cases of persistent vomiting in patients fed by nutritive injections, scraped raw beef (at first taken in very small quantities) has been well borne, given relief to the pain, and stopped the vomiting. When the patient gets tired of milk or the foods named fail to give satisfaction, then some of the various prepared foods, or powdered rice or arrowroot, raw eggs or beef essence are to be remembered. An exclusive milk diet, so far as possible, ought to be continued from three to four weeks. The epigastric

pain, as a rule, has disappeared and the vomiting has stopped long before that time, but it is well to continue the treatment so as to give the stomach rest and avoid irritation. Then for a week or so the patient may still be kept on liquid diet, but with the addition of biscuit or stale bread. He may take bread and milk, or milk boiled with a little sifted flour, or also arrowroot and tapioca.

After a week of this regimen, if the pains do not return, the patient may pass on to solids, such as boiled fish, chicken, pigeon, sweet bread. Scraped beef and raw eggs may also be given with this dietary. Stimulants better are avoided altogether. With this diet, which may be continued for some weeks, the patient often gains weight and may be allowed to take gentle exercise. Gradually mutton chops and small quantities of underdone steak may be taken together with stale bread. Vegetables, however, with the exception of rice, are still to be forbidden, as are cakes and pastries. Milk and small rice puddings may now be allowed.

The duration of this dietary depends on the condition of the patient. If he feels sufficiently strong, he may now follow his occupation and make gradual additions to his dietary. The more indigestible food-stuffs, such as vegetables and pastry should, however, not yet be taken at any time. Patients who have suffered from gastric ulcer should be careful in their diet, not only for weeks, but for months, and with the return of any such symptoms as pain or vomiting, the treatment with rest and strict diet should then again be enforced.

Supervision of the Bowels.—About as essential as the diet is the strict supervision of the attention to the bowels. Constipation is a common accompaniment of gastric ulcer, and its proper treatment is as important as dietetic measures.

Effervescent saline laxative is the chief aperient recommended. This salt, apart from its aperient effects, acts beneficially by diminishing the acidity of the gastric juice, and stimulating the secretion by increasing the peristalsis of the stomach. If greater alkalinity is desired, a little sodium bicarbonate may be added to each dose of saline laxative. In many cases the good effect of the aperient cannot be doubted;

nevertheless, in some the salt increases the pain and discomfort after meals and diminishes the appetite. In such cases, which however are very rare, I have found simple enemas to be of service.

Medication.—Medicinal treatment, in many cases, may assist the dietetic needs. The remedies especially to be recommended are bismuth in the form of the subnitrate or subcarbonate, and sodium bicarbonate. Large doses of bismuth have been recommended; 150 to 300 grains of bismuth subnitrate are suspended in about eight ounces of water, and the mixture is passed into the stomach, first washed out by means of the stomach-tube. It is then allowed to remain in the stomach for fifteen minutes, during which time the patient occupies such a position that the bismuth is brought into contact with the ulcerated surface, if the situation of the lesion can be determined. After this lapse of time the fluid is allowed to run out again through the tube. At first this method is applied daily, and after a time once in two or three days. When the passage of a tube is contraindicated, the bismuth mixture is to be drunk. The bismuth is supposed to act mechanically by forming a covering which protects the ulcer and facilitates healing.

It is well, however, to bear in mind that there have been cases of poisoning from the subnitrate of bismuth, and so the subcarbonate is often used in preference. The subnitrate, if used at all, should be absolutely chemically pure.

When bismuth is given, it should be before meals, and if the pain be very great or irritability of the stomach excessive, it may be combined with 1-10 of a grain of morphine, or 1-4 grain of cocaine. If the appetite be deficient, strychnine or quassin may be added to the mixture.

The carbonate of sodium, calcium, and of magnesium have, for a long time, been given in cases of gastric ulcer. Of these, the first (sodium bicarbonate) is still largely given. The French physicians, especially, report good results and state that such large doses as 300 to 450 grains a day are very well borne by these patients, they only complaining of increased thirst and augmented urination. Occasionally, however, such large

doses produce profuse diarrhea; but this can be obviated by giving some calcium carbonate with the sodium bicarbonate.

Silver nitrate is also an old remedy for gastric ulcer. It is said that it will relieve the pain even better than morphine, while giving relief to the other symptoms as well. Boas has recommended it very highly in the form of solution, in small but gradually increasing doses, beginning with 1-2 grain three times a day and going on gradually to a full grain.

Combatting Pain.—The application of hot poultices or fomentations and rest and regulation of the diet often suffice to relieve the pain. The use of bismuth and silver nitrate has also been mentioned for the severe paroxysms of pain or gastralgia. Codeine, or better still, morphine, either by the mouth or subcutaneously, is indicated. In vomiting or persistent vomiting, abstinence from food by the mouth for some days is to be recommended. Of drugs, drop-doses of dilute hydrocyanic acid, or of bismuth with cocaine often act well.

Checking Gastric Hemorrhage.—The patient is to be kept absolutely at rest and in the recumbent posture; he should not even be allowed to get up to pass urine and feces, and all foods by the mouth should be avoided. If the patient be excessively thirsty, he may swallow small quantities of ice, but even this should be withheld if possible.

If the hemorrhage persists, ergotin should be injected subcutaneously, and ice applied to the epigastrium. In profuse hematemesis oil of turpentine will act well. This may be administered either in capsules or as an emulsion. For the latter, 2 or 3 drams of oil of turpentine is beaten up in the white of one egg, of which 20 to 30 minims may be given, and repeated after some hours if the hemorrhage persists. Ice, gallic acid, ergotin and other styptics have been used with success.

If the anemia produced by the hemorrhage be excessive, the pulse scarcely perceptible, the heart becoming feeble, and the patient showing signs of syncope, then transfusion or injection into the subcutaneous tissue of one pint or more of normal salt solution may be resorted to. For some three to six days after the last attack of hemorrhage the pa-

tient must be fed exclusively by enemas and must maintain the recumbent position. After that period, the treatment for the healing of the ulcer by rest, i. e., liquid food and hot applications to the epigastrium, must be systematically carried out.

In cases in which profuse hemorrhages occur from time to time and exhaust the patient, an operation may be advisable. In cases of perforation, large doses of morphine are to be given, the patient being steadily kept under its influence by means of opium or codeine in suppositories or in small enemas. At the same time, as a stimulant, caffeine may be given by the mouth or subcutaneously, as also rectal injections of brandy. Perforation must be treated surgically.

GASTRALGIA

The treatment of gastric neuroses is of two kinds or purposes. Immediate relief is urgently needed in bad cases. In all cases general treatment is required to cure both local distress and the state of the system determining the malady.

First let us suppose that the gastralgia appears in a young woman whose general condition is not one to cause much anxiety. She may be anemic, in which case her general condition will not be forgotten. Iron alone may bring relief, but if not, arsenic carefully used will pretty surely secure the same. It is needless to say that diet and mode of life must be carefully ordered.

Rest Treatment.—Next let us suppose the patient to be an older person, of either sex, of neurotic nature, and reduced by pain, refusal of food or adverse circumstances.

Here, the first thing to be done is to put the patient to bed for a week, and no excuses arising from mere restlessness are to be admitted. Many a bad case of gastralgia, as of other neuralgia, has been cured by two or three weeks in bed, with careful management of the diet, warmth, rest and seclusion from affairs, the coaxing of bland food into the weary stomach; a little hydrocyanic acid being the chief agent of relief. If massage can be added, light at first and increased as the strength will bear it, the recovery will be facilitated.

If after the first two days in bed the pain is still troublesome, let codeine or small doses of morphine be given. It is better, for obvious reasons, to avoid the hypodermic syringe, and, fortunately, in these cases nothing answers better than small doses of codeine, the nature of which the patient may well be ignorant of. Some means may be used to avert constipation, if preparations of opium are given. *Cannabis indica* is recommended by many authors. Opium and its preparations are far more trustworthy, and if kept under the control of a physician, may be used for some days or even for two or three weeks without ill consequences. Cocaine is not more useful and has disadvantages of its own.

Acids and Alkalis Not Needed.—As the digestive act itself is by the nature of the case supposed to be fairly normal, no acid, alkali, bitters and the like are required; nor, in my experience, is rectal feeding, so useful in many stomach diseases, required in these neuroses, although a clyster of water as hot as it can be borne may relieve the pain. For the same reason I do not trouble myself much with pepsin, pancreatin or predigested foods. The stomach can deal with tender and bland articles of diet well cooked, divided, and given in small quantities, and they are far more enticing to the patient and more acceptable to his stomach than peptonized foods. Indeed, too strict a rule of diet, in these cases, is to be deprecated, even whims must be regarded and occasionally welcomed.

Other Measures.—Warmth and even mild counterirritation to the epigastrium are profitable. After a few days, silver, either as a nitrate or the oxide in pills, will be of service in combination with codeine and morphine; or, if this drug be no longer necessary, alone.

As the gastralgia subsides, the patient must be toned up in the usual way. Arsenic must not be forgotten as one of the best remedies for chronic gastralgia, but during the acuter stages, codeine (or morphine) is the one drug of real service. The value of arsenic in asthma, eczema, and even in angina pectoris, probably depends on the same virtue, whatever it may be. If there be such a thing as malarial gastralgia, quinine must

be the means of cure. Strychnine, in my experience, has not been found of any great service in any form of the malady, save in the form of the triple arsenates of iron, quinine and strychnine.

Gout and Gastralgia.—That the epigastric pains of gout are gastralgic in the sense in which we are now using the name is improbable. If gout or hysteria be concerned in the matter, the treatment appropriate to these diseases must be applied, according to indications.

Sometimes we will have pain in the stomach owing to defective expansion of the chest, then pulmonary gymnastics are very important. These gymnastics often are applied with considerable benefit in cases of dilatation of the stomach.

For nervous anorexia there is but one cure, namely, care and feeding by a judicious nurse, not of the family. I should say that the cure of such a case is not to be attempted at home, and that the patient should, under all circumstances, be removed to the care of strangers, were it not that I have succeeded more than once in accomplishing a cure at home; but in any case a trained nurse is indispensable. It is also indispensable that she have her own way undisturbed by the interference and opinions of the family and friends of the patient. If this cannot be secured, the physician will not desert his post, but he will disclaim all responsibility for the failure which may be his portion.

Of all these cases, the most difficult are those of neurotic vomiting. These patients are better removed from home, but the removal is not the almost certain cure that it is in nervous anorexia. Were it easy to prescribe the means of cure, there would be less of the difficulty which I have indicated. Food, however judiciously administered, too often returns, whether it be given in the smallest doses or given in rather large quantities once in twenty-four hours. The irritability of the stomach prevents the very means we desire to use. Massage with generous diet does not exhaust the patient. Lavage is of little use.

Most Useful Measures.—Drugs are rejected. On the whole, the best means are rectal feeding, with the use of sedatives to calm the stomach and reestablish a gradual

tolerance of food. The hypodermic use of morphine is to be avoided if possible. Moreover, in many of these cases, as the effects of the morphine pass off, it sets up some additional nausea.

I have found the most advantage from the use of bromides with the hydrocyanic acid, or, if this fails, with chloralamid. The latter combination, if administered in small and repeated quantities, often soothes the irritable coats, and food is retained. Calmine (sodium diethylbarbiturate), in the few cases in which I have tried it, acts very well indeed in allaying the nausea. With cerium oxalate I have not much experience; but if of any value, it must be used in much larger doses than those usually ordered, namely, 5 to 10 grains. Bismuth in the small doses of 10 to 15 grains is valueless, or nearly so. It has been used recently in doses of 1-4 to 1-2 ounce, mixed with a large quantity of water as an irrigation. But I have no experience with the plan. At all events, its perfect freedom from arsenic, lead and tellurium must be guaranteed.

Arsenic.—Of arsenic I can say more. Very small doses of this agent, in the form of the arsenous acid, or 1-4 or 1-2-drop doses of Fowler's solution in a teaspoonful of water, will often quiet the stomach in many cases of neurotic vomiting. It is best that these patients be not kept altogether in bed, although they should lie down after food, with perhaps a hot-water-bag to the epigastrium; and, if nausea and disposition to vomit comes on, the patient, in spite of efforts to the contrary, must be dissuaded from lifting his head. After trial of all such means without success, the patient may make a quick turn and recover. Perhaps, indeed, this is the issue of most of these aggravating cases of neurotic vomiting.

As regards diet, alcohol is a dangerous remedy to recommend to neurotic persons; fortunately they do not find much benefit from it. In moderate quantities, with meals only, it may be valuable during the worst phases of health, being omitted on complete convalescence. The effects of tea, coffee and tobacco on these patients should be carefully watched. They, or one or other of them, may be injurious. So also the odd reactions of some persons to certain foods,

such as eggs or shellfish, must not be forgotten.

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THE QUESTION OF FEEDING IN GASTRIC ULCER

Some years ago Messrs. Wm. Wood & Co. published a book by Hilton, entitled "Rest and Pain." It was of such value that it should never have been allowed to go out of print. Many of us who knew the truths it enunciated were aroused to a new sense of their importance by this book, and also learned of applications of this principle of which we had not dreamed.

In no internal disease is the principle of rest more essential to the success of the treatment than in gastric ulcer. Here the rest of that organ should be absolute. There should never be any feeding by the stomach which would induce the secretion of the acid gastric juice.

Few people really need anything like as much food as they consume, and while absorption from the rectum is not very satisfactory as a means of feeding, nevertheless it helps. Absorption from the vagina is far more active than from the rectum; and in these cases I have often succeeded in extending the time during which absolutely no food of any description is put into the stomach, by using suppositories of cotton, saturated with sanguiferrin, placed in the vagina and changed every eight hours.

The skin is capable of absorbing far more nourishment than is usually supposed, and while few of our patients are financially fitted to take baths of hot milk, they could be used in cases of emergency. Sponging with hot milk should be also a useful procedure. I have repeatedly satisfied myself of the great absorptive power of the skin, by the daily application of codliver oil or lanolin to parts where it was desirable to restore contour. In two weeks I have restored one inch of girth to a wasted arm by this procedure.

The subcutaneous administration of food is a possibility that has yet to be developed, but a decided amelioration of hunger as well as of thirst follows the administration of

decinormal saline solution hypodermically. We must not forget we have the means of satisfying thirst, and to a certain degree of hunger, by the nutritive baths. It is incredible how much fluid will be absorbed by the skin of a person whose blood has been reduced by abstinence.

A week or ten days of comparative starvation, that is, the absolute disuse of food by way of the stomach, and its application by the routes herein suggested, should usually see the healing of a gastric ulcer, especially if minute doses of the silver salts are given, besides enough morphine to restrain pain, should that occur.

When the use of food is resumed, one should begin with the least irritant substances, and of these I greatly prefer the raw white of egg, diffused through three parts its bulk of cold water. The next-best is clam broth. I do not know whether my old friend Burnham is still alive, and as devoted to theosophy as ever; I do know, however, that his clam broth has no superior, or at least, if it has, I have never been fortunate enough to find it. Many a time I have relieved distressing symptoms of irritation in the stomach by a cup of hot milk and water containing a tablespoonful of this broth. It seems to have specific powers in relieving gastric irritability and restoring to the stomach the capacity of digesting other foods.

It should not be forgotten that the pepsin compounds have a sedative effect upon an irritated stomach, which is entirely apart and distinct from their effects in promoting the digestion of foods. Very many times a dose of ingluvin, lactopeptin, or some other pepsin combination has relieved an irritable stomach when the digestive power of the dose was almost *nil*.

One final word as to this irritability of the stomach and vomiting: I have sometimes found total abstinence from food and drink for full twenty-four hours succeed in stopping vomiting when every other remedy had failed. However, this was before I realized the remarkable control exerted over this part of the pneumogastric tract by the hypodermic administration of atropine. Irritability of the stomach is controlled by atropine with mathematic precision.

Sometimes cases come to the physician where the patient has sudden and agonizing pain, felt in the stomach and well up under the sternum. This is the pain for which powerful carminatives or local stimulant combinations are employed—when camphor, chloroform, ether, ginger, in fact anything that is hot will generally give relief. As acidity commonly is present, a whole teaspoonful of sodium bicarbonate ordinarily is effective, but the quickest of all remedies, for this condition, which I have ever used is calcidin.

One of the lessons which has come to me after years of observation is the frequency with which gastric irritation is dependent upon fecal collections in the large bowel. Nowadays I never think of attempting to treat directly any gastric irritability whatsoever without first completely emptying the colon. It saves one many a mortification, and saves the patient many an hour of distress, if this important duty is first attended to as a routine measure.

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COMMENT ON THE LESSON

Dysentery Once More.—From North Yakima, Washington, we get an excellent paper in dysentery, from Dr. Richard Connell. Dr. Connell says:

"I have had good results from the liberal use of the effervescent saline laxative, the sulphocarbolates, tonic or stimulant remedies, the least possible quantity of opium to produce rest and an enema of cool water injected into the rectum following each movement, with colonic irrigation several times per day, plain hot water or medicated. Where it is not practical to use a tube for the colon I have the patient's hips elevated and use an ordinary rectal tube, allowing fluid to gravitate into the colon. I have secured such good results from this line of treatment that I rarely use the ipecac in large doses; however, I use emetin frequently and think it gives favorable results.

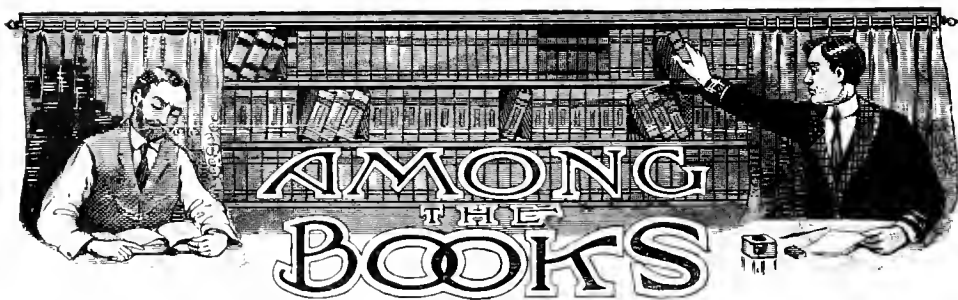
"Last fall I had a case, a baby nine months old, with symptoms of dysentery; pain over the abdomen, mucous stools, stained or mixed with blood, restlessness, and becoming rapidly

emaciated. I put it on the usual remedies, including the medicated irrigations, using the rectal tube after each stool. After a day's trial of this the mother became alarmed at the deep color and large quantity of the mucus (as they always do), and considering the age of the patient I felt rather dubious also. I sent word to the mother to have the child brought to the office, about four blocks from home. At this time the child was having numerous stools and was very restless. About 9 o'clock p. m. I placed a Geissler vacuum surface to the child's abdomen, turned on the mildest current possible from my high-frequency coil, and gently moved it over the colon five minutes. The child slept all night and did not have another movement for twenty-four hours, and the change in her face was very pleasing. She brought the child over for treatment several times, keeping up the other treatment. The child made a good recovery, the case lasting about a week or possibly a little longer. I believe the electricity in this case simply acted as a stimulant or tonic to the weakened tissues, including the solar plexus, enabling the leukocytes to maintain the battle to a successful finish, or increased the efficiency of the other treatment.

"During the winter I attended a nursing baby three weeks old with this disease (catarrhal colitis). There were bloody mucopurulent stools, tenesmus, restlessness and emaciation. I ordered enemata, medicated with argyrol, a rectal tube, elevating hips, three or four times daily. Perfect recovery. In this case I of course used the usual internal remedies. In this case I was puzzled to account for the source of infection. The drinking water was invariably boiled and no artificial food was administered."

EXAMINATION QUESTIONS

1. How is the rest cure given in gastric ulcer? Outline diet for a case of this kind.
2. Give three formulas for good rectal nutrient enemata.
3. What remedial agents are valuable in the treatment of gastric ulcer and how should they be used?
4. With what conditions is gastralgia likely to be confused? Make differential diagnosis.
5. What remedies are useful for alleviation of gastralgia? for its cure?
6. When should a case of gastric ulcer be referred for surgical operation?
7. Describe a case of ulcer of the stomach occurring in your own practice.



SALEEBY'S "PARENTHOOD AND RACE CULTURE"

Parenthood and Race Culture. An Outline of Eugenics. By Caleb Williams Saleeby, M. D. Ch. B. New York: Moffat, Yard & Co.

This work is based on the trite semi-truisms which mar most of the platitudinous modern discussions of heredity. The fundamental idea is a nickel-in-the-slot initial velocity whereby the spermatozoon emerges as a completed being.

This homunculus-notion on which Sterne lays such stress in *Tristram Shandy* was exploded nearly three-quarters of a century ago by the embryologic discoveries of Von Baer. The fact that the ovum plays the chief part in embryogeny and that it is chiefly a product of maternal environment is totally ignored.

The influence of the struggle for existence between the developing organs, shown by Roux more than twenty-five years ago, receives no attention from the author. The evolution by atrophy, which DeMoor has demonstrated, and the resultant periods of stress, such as simial or senile periods of embryonic arrest, and which plays such a part in precocity and allied premature senilities, has not come within Dr. Saleeby's ken. The fact that this is the result of a struggle between the male and female types, of which the female is the higher inasmuch as it determines position in the scale of life, is seemingly unknown to the author.

Prenatal environment is largely ignored in the book. Heredity is erroneously regarded as a destiny which *must* be, not as Kiernan has said, as a prophecy of that which *may* be. This fatalistic notion marks the

book, since maternal environment before birth and child environment after birth lie behind most of the alleged effects of heredity.

Dr. Saleeby's motive is to be commended. He is evidently sincere and honest in his convictions. Books of this character with correct premises are valuable, for "there is," as Saleeby truly says, "no greater need for society today than to recognize that education must include, *must culminate in*, preparation for the supreme duty of parenthood. . . . The boy and the girl, both, must learn that the racial instinct exists for the highest of ends—the continuance and ultimate elevation of the life of mankind. It is a sacred trust for the life of this world to come. We must teach our boys what it is to be really 'manly'—the fine word used by the tempter of youth when he means 'beastly.' To be manly is to be master of this instinct. And the 'higher education' of our girls, as we must teach our own selves, will be lower, not higher, if it does not serve and conserve the future mother, both by teaching her how to care for and guard her body, which is the temple of life to come, and how afterward to be a right educator of her children. The leading idea upon which one would insist is that the key to any of the right and useful methods of eugenic education is to be found in the conception of the racial instinct as existing for parenthood and to be guarded, revered, educated for that supreme end."

To the student of eugenics the volume will be found interesting, although, possibly, not always convincing. It is to be hoped that this book will stimulate study along these lines which unfortunately have been so neglected. It certainly ought, in some measure, help to fill up the immense void

of ignorance which prevails among the laity in regard to these matters, and no less—and more's the pity—among many in our profession.

Altogether, Dr. Saleeby is to be commended for his telling style, his plain yet elegant diction, and the enterprise he has displayed in quoting from innumerable writers on eugenics and allied subjects.

The volume can hardly fail to be a unique and interesting accession to the doctor's library.

"INTERNATIONAL CLINICS"

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles. Edited by W. T. Longcope, M. D. Philadelphia and London: J. B. Lippincott Company. Volume IV, Nineteenth Series, 1909. Volumes I, II, III, 1910. Price \$2.00 per volume.

Among the important articles in these volumes of the "International Clinics" we mention the following: Antimeningitis serum and the results of its employment, by Simon Flexner; diagnosis and treatment of pernicious anemia, by Walter L. Bierring; color photographs in relation to surgery, by C. B. Longenecker; indications for surgery of the prostate, in volume four, 19th series.

Volumes 1, 2 and 3 of the 20th series contain several articles on the serum diagnosis of syphilis, on pellagra, tuberculosis and other zymotic and infectious diseases, and their biologic and general treatment. The variety of the topics is almost as great as the number of titles, and it is hardly feasible to give even only a list of contents of these splendid books which afford us an idea of the progress of the medical sciences.

In volume 2 of the 20th series the lighter aspect of the physician's life has been considered in a paper by Roland G. Curtin of Philadelphia on book-plates of physicians, with remarks on the physician's leisure-hour hobbies.

The "International Clinics" realize their intention and purpose most excellently. They afford, in the form of special articles and of reviews, a bird's-eye view of what has been accomplished and of what is being done by those members of the profession who de-

vote themselves to research, as well as by the clinical workers. These volumes most surely deserve a place in every physician's library, and are well worth his careful study.

STEWART'S "VISCERAL SURGERY"

Visceral Surgery in Abstract. By A. Stewart. The Medical Abstract Publishing Co., Pittsburg, Pa. Price \$1.00.

This is a further volume of the very useful series of abstracts offered by the publishers. It covers briefly the principal points on abdominal surgery, operative gynecology, thoracic surgery, brain surgery, surgery of blood-vessels, of breast, proctology and hernia. We have repeatedly called the attention of our readers to this series which gives in brief outlines the principal information afforded by the text books on the subjects treated. In the present number the works of Rose and Carless, Cushing and Penrose have been freely consulted and abstracted.

GOULD'S "BIOGRAPHIC CLINICS"

Biographic Clinics. Volume VI. Essays concerning the influence of visual function, pathologic and physiologic, upon the health of patients. By George Gould, M. D. Philadelphia: P. Blakiston's Son & Co. 1909. Price \$1.00.

This sixth volume of "Biographic Clinics" is the last one that is to appear from the pen of the author, and is introduced by a valediction. The essays include "The case of Jonathan Swift," "Brief biographic clinics upon living patients," and nine others on the subject set forth in the title.

BOYLE'S "PRACTICAL ANESTHETICS"

Practical Anesthetics. By H. Edmund G. Boyle, M. R. C. S., L. R. C. P. London and New York: Oxford Medical Publications. Price \$1.50.

The author, who is anesthetist to St. Bartholomew's Hospital in London, is peculiarly fitted to offer advice and instruction on the very important subject of anesthesia. The little volume deals with the administration of nitrous oxide, ether, chloroform, ethyl chloride, and their various mixtures.

We have read the book with much interest and benefit. However, in the Bookworm's opinion, at least, a short mention of what the Germans call *daemmerschlaf* (or "twilight" of "drowsing" sleep), i. e., the hyoscine-morphine narcosis, would have been desirable.

This means of obtaining or introducing narcosis, both in surgery and obstetrics, has gained a considerable foothold, especially among American physicians, and an English monograph on the subject would be timely, the more so as the German monograph on anesthesia, by Von Steinbuechel, is several years old, and does not cover the full field.

The analgesia obtained by the lumbar injection of stovaine and other drugs is too difficult a procedure ever to become popular with the general practitioner, and is, therefore, properly omitted from consideration. We do miss, however, a reference to hypnosis, or suggestion, which J. M. Bramwell (New York, 1910) shows to have been a very important means of inducing surgical analgesia in times gone by and which is still of value in selected cases.

Aside from these strictures, the book is well written and will prove of undoubted usefulness.

A NEW FRENCH JOURNAL

We have received, from the publishers, the first number of *Biologica*, a "paramedical" journal, which is to be published in Paris under the editorial direction of such men as R. Blanchard, A. Calmette, A. Gautier, J. Grasset, and others, all being either members of the Académie de Médecine or of the Académie des Sciences. This publication, we are requested to point out, is to be a scientific review of the auxiliary, or as the prospectus calls them, the "paramedical," sciences rather than a practical or otherwise strictly medical journal. It will be devoted more to general than to human biology.

There is no doubt that the physician, however busy he may be, must keep up his studies on, not only the strictly medical progress, but also on that in the allied sciences. Especially is biology a highly

interesting and important field of investigation, the more so as the modern trend of treatment is in the direction of so-called biologic remedies, the action of which cannot be understood by the customary physiological and chemical methods of investigation and testing.

Those of our readers who have a sufficient command of the French language undoubtedly will find much of interest in this new publication, which is published by A. Poinat, 11 Rue Dupuytren, Paris at the subscription price of 8 francs (\$1.60) for countries outside of France.

PEABODY'S "RELIGIO-MEDICAL MASQUERADE"

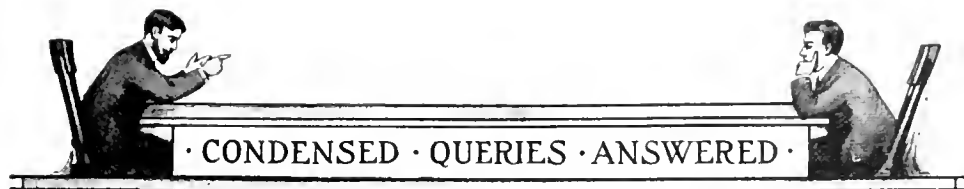
The Religio-Medical Masquerade. A complete exposure of Christian Science. By Frederick W. Peabody, LL. B., of the Boston bar. Boston: The Hancock Press. 1910. Price \$1.00.

The author, who has been engaged in a number of law-suits against Mrs. Eddy, denounces this founder of a religious sect and her cult in scathing language and unmeasured terms, and presents documentary and other evidence that her claims concerning her inspiration and her power of healing are false, that she has promulgated her method and "religion" for revenue only, and that her tenets are dangerous. He is unsparing in his condemnation of Mrs. Eddy and her tools and helpers.

The Look is of interest to all thinking men and women who desire to inform themselves on the reasons for the strange fascination which this woman and her teachings exert on so many well-educated and mentally otherwise well-balanced persons.

A CORRECTION

Dr. J. H. McCurrie, whose book on "Malaria and Its Manifestations" we reviewed in CLINICAL MEDICINE for January (page 135), writes us to the effect that he has published the book himself, and that the price is \$1.50, and not \$1.00, as was stated. We gladly make this correction, and again take pleasure in commending it to our readers.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERIES

QUERY 5664.—“Infantile Genitalia.” G. A. P., Illinois, reports a case of unusual interest in a woman 29 years of age, recently married, who seems well developed in every way with the exception of the genital organs. The labiæ are quite small and the vagina will admit only the index-finger—and that with pain. The uterus also seems quite small. A vaginal dilator has been recommended, and now they ask whether she will become pregnant after its use.

The genitalia in this case may be of an infantile character, and a thorough examination (which is essential) may reveal abnormalities which would totally prevent the possibility of pregnancy. The age of the patient must be considered. Of course, the marital relation may, in time, bring about a vast change. Dilatation should be very gradual and no force whatever should be used or chronic vaginismus is quite likely to result.

One thing may be regarded as certain: Should she become pregnant, that is, the uterus will rapidly accommodate itself to the new condition. Are you quite positive that there is not a spasmodic condition of the sphincter vaginæ and a quite roomy canal behind it? What is the character of the woman, phlegmatic and frigid, or the reverse? Much depends upon this as well as upon her confidence and affection in and for her husband. If he is at all objectionable to her and she is of a nonerotic type the condition will be difficult to relieve.

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QUERY 5665.—“Nocturnal Emissions.” R. W. H., Canada, asks for suggestions in the following case. Ten days ago a man

of 37, single, apparently enjoying perfect health except for being moderately deaf, presented himself to be cured of nocturnal emissions. He is a hard-working laborer and fanatically religious. Erections and concomitant thoughts which he vainly tries to repress often keep him awake until long after midnight, this occurring almost nightly, and four times or oftener a week he finds his linen stained on rising. Very seldom he feels tired or physically depressed in the morning. His digestion, bowel movements, urine, and other functions seem absolutely normal. Syphilis and gonorrhea are excluded.

The man was placed on bromides with the result that he has no difficulty in going to sleep shortly after retiring, but finds that during the night the emissions have taken place as before. He is becoming worried and introspective and is in fear that masturbation, insanity, and other dire things will develop. Chromium sulphate and tepid baths have just now been added to this treatment.

Examine the urethra for hyperesthesia, the prostate for hypertrophy, the sphincter ani for constriction, fissure, etc., and the lower bowel for congested or ulcerated areas. Find out something about this man's prior sexual habits, and either examine his urine or have this done.

In the meantime pass a cold sterile steel sound every third day, gradually increasing the size of instrument. Saturate the patient with calcium sulphide and salicin: calcium sulphide, 1-3 grain, and salicin, 1-3 grain, given four times daily. In addition, monobromated camphor, 1 grain, with

cyripedin, 1-3 grain, may be given with a swallow or two of hot water half an hour before retiring. The bowels should be emptied before the patient goes to bed. Let him wash out the rectum with lukewarm normal saline solution.

For the psychic effect, speak very positively to your patient, assuring him that the condition will disappear provided he follows instructions and lives normally. If the man's peculiarities are not so pronounced as to render him an undesirable mate for a normal woman, a happy marriage presumably would have a beneficial influence on his condition. If he tires himself out physically before going to bed and takes a cold sponge the last thing he will find most of his troubles disappear. Of course, irritative food, if any, must be discovered and removed. We should not give bromides; delphinine will prove preferable if further sedation is needed.

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 QUERY 5666.—"Atypical Variola." R. P. W., Arkansas, has observed several cases of smallpox in which, after the initial chill lasting twenty-four to forty-eight hours, the fever would entirely disappear and the patient get out of bed and go on about his business, the eruption appearing four, five, or even seven days later. This strikes the doctor as a little unusual, although recently he has had six or seven cases run this same peculiar course.

Is it absolutely certain that these patients suffered from variola? The writer of this has treated only three cases of smallpox in his life, but he directed the treatment of nine inmates of the pest house, receiving daily reports from the physician in attendance. His own experience and a careful study of the literature upon the subject would lead him to consider such clinical conditions as above depicted to be unheard of.

In cases of true variola, as a rule promptly upon the twelfth day after infection (although this period may be reduced by twenty-four or forty-eight hours) the initial chill appears, followed by high fever, headache, backache, and other symptoms. This condition subsides, usually, in about forty-eight hours (sixty hours is the longest period re-

ported), when the eruption makes its appearance. The subsidence of the fever is due to the eruption, while, as we know, the secondary fever which occurs during pustulation is extremely intense in severe cases. That a man could suffer an initial chill followed by a rise of temperature lasting from twenty-four to forty-eight hours and then be entirely free from hyperpyrexia and feel well enough to get up and go about his business is almost unbelievable, especially if the same individual in five to seven days presents the typical eruption.

"Mixed infection" may account for much, and reduced virulence can be accepted as a modifying factor, but old observers state that they have never seen complete deferrescence or more than forty-eight to sixty hours intervene between the initial chill (or convulsion) and the eruption.

No wonder you regard these cases as a "little unusual," and we sincerely hope, Doctor, that you will write a detailed description of one or more cases. You do not give us any idea of the course pursued by the disease in these individuals after the eruption appeared. Was there pustulation, umbilication, desiccation, etc., and did pitting follow? How great was the systemic disturbance and was the odor marked? A man who has once smelled the odor present in a true smallpox case will never mistake any other disease for variola.

We have very many times called attention to the difference between the so-called Cuban itch and variola. If you are a subscriber look up your files, especially for 1907. Also, from Dr. James A. Egan, Secretary of the State Board of Health, Springfield, Ill., you can obtain a very interesting little booklet on smallpox, "Cuban itch" and similar affections.

Unfortunately the term "Cuban itch" is very loosely used and may designate scabies, varioloid, variola, or any one of several eruptive diseases. In many instances patients supposed to suffer from "Cuban itch" were found by the state inspectors to have true variola. Again, the authorities, regarding "Cuban itch" and smallpox as one, ordered the quarantining of some patients reported by the local physician to be suffering from "Cuban itch."

Energetic protests followed a diagnosis of chicken-pox. Lately, moreover, the terms prairie-itch and Cuban itch have been used interchangeably.

QUERY 5667.—“Flexible Stem Pessaries in Version with Stenosis.” G. L., Georgia, desires us to recommend an intrauterine stem pessary for constant wear in cases of flexion and cervical stenosis, one that will serve as drainage tube as well; a flexible soft-rubber appliance preferred.

Any surgical-instrument house can supply stem pessaries of approved form, but we rather question the efficacy of the perforated tube. Such appliances are very apt to set up infection of the endometrium. Personally we would not think of applying such a pessary.

Further, in any marked case of flexion a *flexible* stem pessary would not prove supportive, while such an instrument would be passed with the greatest difficulty into a stenosed cervical canal. In a case of flexion with stenosis a rigid stem alone would prove useful, it seems. But, Doctor, why not cure the conditions?

QUERY 5668.—“Pruritus from Retention of Bile.” W. A. P., Maine, is treating a patient who presented herself with a previous history of gallstones; she is “all run down,” anemic, cachectic, and looks like a quarter-blood negress. Her main trouble is an intense itching from head to foot and she scratches until she scratches the skin off. The malady is worse about the face and eyes and she is continually “digging at herself.” Several years ago she had “rheumatism,” and after the doctor gave her up, she tells him, she took sulphur (pounds of it), and cured herself that way. A year and a half ago she weighed over 200 pounds and has lost weight continually, weighing now 138 pounds. At present she is gaining in strength, her bowels being kept clean with laxative salines and occasional doses of calomel and podophyllin. No albumin is found in the urine, the specific gravity varying from 1018 to 1022.

Have her bathe the entire body with carbolyzed epsom-salt solution (one ounce of epsom salt, one quart of water, 10 minims of

carbolic acid.) Give leptandrin, euonymin and iridin before dinner and supper, with chionanthin, 1 grain, after the three meals. Before breakfast, order a dose of sodium sulphate, and one hour after meals bilein and sodium sulphocarbolate. Examine carefully the hepatic area for lessened or increased dulness and see whether you can distinguish any abnormality of the gall-bladder.

Cannabin, strychnine valerianate and quinine hypophosphite may be given, during the early stages of treatment, to control the pruritus and in order to make a pronounced impression and compel the patient to realize that the treatment is effective, you might have her use the following at night: Salicylic acid, 45 grains; menthol, 15 grains; lanum, 2 ounces; benzoated lard, 1 ounce; olive oil, 2 drams. This should be washed off the exposed surfaces in the morning.

QUERY 5669.—“Removal of Superfluous Hair.” G. G., Missouri, has under observation an intelligent girl of twenty-one who since the age of puberty has been afflicted with a heavy chin-beard. Her personality is very feminine. The beard is an exact duplicate of that of an old lady whom the girl has known all her life, and prior to her birth this bearded woman was a frequent associate of her mother. Hence, many believe the girl's beard a birth mark. Her beard is soft and wavy and was never shaved until about a year ago, when it had attained a length of four or five inches.

We sincerely regret to say that no depilatory known to us is likely to prove satisfactory in this case. A good depilatory will remove hair but not prevent its growing again. Shaving, of course, makes the matter worse, and while the intelligent use of a depilatory might ultimately markedly reduce the luxuriance of the growth, we fear hair would constantly reappear.

We advise that your patient consult a competent electrotherapist, as the hair can positively be destroyed absolutely with the electric needle. It will take some time to do the work thoroughly, but once done, the victim will be rid of her unwelcome hirsute appendage forever. A competent operator will leave no scars.

QUERY 5670.—“Forced Flexion in Ankylosis.” O. E. A., Missouri, has a patient with a stiff arm and knee which have “improved somewhat under treatment,” but wishes to know whether it would be advisable to break up the adhesions?

We hesitate to advise forcible breaking up of the adhesions, in view of our limited knowledge of the local and systemic conditions subsisting. Much depends upon whether a false (fibrous) or true ankylosis exists. Occasionally a combination of extraarticular, intraarticular (ordinary fibrous) and bony ankylosis obtains. In intraarticular (fibrous) ankylosis movement is checked more abruptly than in an extraarticular one. In such cases the joint may be moved vigorously for two or three minutes, under chloroform. If swelling occurs, compresses wrung out of a hot epsom-salt solution should be applied, and also the parts well massaged with a weak iodine ointment, lanum being used as a base. Passive motion, friction and steam-baths should be tried, first together with the use of iodine ointment.

If you are sure that a fibrous ankylosis exists, take a short hold near the joint and try to rupture adhesions by flexion. The patient, of course, should be anesthetized. In osseous ankylosis do not interfere unless the patient decides to submit to resection—or whatever procedure may prove necessary when the joint is opened. If there is any infection of the joint, evidenced by redness and swelling or systemic disturbance, forced flexion is inadvisable. Chromium sulphate and calx iodata may be advantageously given here.

QUERY 5671.—“Apomorphine in Pertussis and Croup.” C. W. B., Virginia, desires to know if it would be safe in a case of whooping-cough or croup to give a hypodermic of apomorphine to a child of one or two years of age. If so, what would be a safe dose?

In croup, apomorphine should almost always be given hypodermically; invariably so if dyspnea is present and due to the presence of membrane or secretions which the child is unable to expel. In ordinary cases of croup, 1-50 grain may be given internally

every fifteen minutes to effect. We usually employ the granule containing 1-67 grain, or even two of them. To produce prompt emesis, a child of one year may receive 1-30 of a grain of apomorphine hypodermically. A child of two or over, 1-20 grain; a child over five, 1-10 grain. We should not hesitate to give the larger dose to the younger child.

In whooping-cough, apomorphine is not indicated, at least the pediatricists most familiar with alkaloidal practice have never suggested its administration. Emetin, however, is a useful expectorant and may be combined with helenin. During the spasmodic stage of pertussis, vomiting, as you know, quite often follows coughing spells. It is usually desirable to put a stop to the spasms, to sedate cough and prevent ejection of the stomach-contents. Calcium sulphide and emetin with monobromated camphor, to allay the spasmodic condition, make an excellent combination.

The time to “cure” whooping-cough, however, is before the “whoop” is heard. In the early catarrhal stage, three remedies are enough: atropine, calcium sulphide and calx iodata. The bowels should, of course, be kept thoroughly cleansed with small divided doses of calomel and podophyllin. The valerianate of atropine here is better than the sulphate. Hyoscyamine also is effective. If the spasms are unusually severe, hyoscyne and morphine with cactin in small doses may be given. Under ordinary circumstances, cicutine, lobelin, monobromated camphor and quinine hydroferrocyanide, alternated with atropine valerianate, will prove sufficient.

We suggest that you read the chapter on the treatment of pertussis in Candler’s “Every-Day Diseases of Children.”

QUERY 5672.—“Impotence.” J. W. K., Texas, has under treatment an old man who has lost almost all power of erection. He is a very stout, healthy, robust man, of the venerable age of 76 years, in fine flesh (200 pounds), who has never in his life indulged in irregularities of any kind; he never even has taken a drink of any kind of spirituous liquors. “Now what,” our correspondent queries, “is the best thing for him to take?”

The "best thing" would be fresh air, a light diet and physical exercise. But, frankly, Doctor, don't you think that a man of "seventy-six" could manage to get along without aphrodisiacs? "The leaves decay, the leaves fall," might appropriately be quoted to this concupiscent individual, and his attention called to the fact that there are four seasons in the life of the individual—as for the world at large—spring, summer, autumn, winter. A man who is so close to the four-score mark has certainly entered the "winter" of his existence. In this case it is evidently "the winter of his discontent," and we fear even positive therapeutic methods would fail to make it glorious! This gentleman's mind should be fixed upon matters other than those connected with the reproduction of the human species. It might, perhaps, be possible to stir up the dying embers, but the resultant flame would, we fear, vengefully destroy the old gentleman himself. As you are doubtless aware, several dissatisfied octogenarians have been "snuffed out" with appalling suddenness while "trenching upon the prerogatives of youth!"

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 QUERY 5673.—"Rectal Fistula." M. C. S., South Dakota, asks us to outline treatment for a case of rectal fistula, internal and external. Patient a strong, healthy man of thirty-five years. Various treatments have been tried, but without much benefit.

The treatment of fistula in ano should, preferably, be surgical, but the actual cautery, caustics, or ligature may be used; the latter, however, are only to be thought of when the patient refuses operation and presents a single complete fistula. As a matter of fact, small fistulae having their internal opening between the two sphincter-muscles can easily be laid open under local anesthesia; but for the rectal variety surgical anesthesia must be induced. For full technic of operation see Albright's or any modern work on rectal surgery.

If a single sinus exists and operation is declined, the sphincter ani should be dilated, the fistula cleansed with hydrogen dioxide and an alkaline antiseptic solution, and the sinus swabbed with pure carbolic acid on a cotton-wrapped probe, neutralizing with alco-

hol in three minutes. Then insert a wick of gauze saturated with thuja or thymol iodide in oil solution. Bismuth paste (Beck's formula) is being used extensively, and excellent results are secured in many instances.

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 QUERY 5674.—"Nephrolithiasis." A. L. M., Ohio, is treating a man about forty-five years old, weighing 175, and in fair health generally, with the exception of occasional attacks of ureteral colic from the passing of a calculus. A year or so ago a physician began to treat him, aiming to prevent the stone formation in the kidneys, but the attacks seemed to come on more frequently. So the patient quit the medicine and has been taking some kind of patent nostrum, with, however, no better results. The doctor asks: "Would not more frequent attacks be the logical result of treatment—the concretions in the kidneys reduced in size escaping into the ureters and causing the trouble? Or would the calculi dissolve without escaping? The patient has had a good-sized stone in the bladder for some years, but this does not trouble him except when, in an effort to urinate, it falls down and shuts off the stream. He is not willing to have it removed so long as he feels as well as he does."

Before we can aid you intelligently, it is essential that we have a definite idea of the character of the calculus. Send a 4-ounce specimen of urine to the laboratory, taking care to secure any sediment which may be in the bottom of the vessel. Also send any concretions which may have been voided.

Renal calculi may be composed of uric acid, calcium oxalate or the phosphates of calcium, potassium and magnesium. Bear in mind that calcium carbonate with lithium and colchicine prevents the formation, but can hardly exert a solvent action upon uric-acid concretions. Such an alkaline diuretic should be given three times daily, with arbutin, 1-3 to 1 grain; lithium benzoate and barley water may be ordered almost *ad libitum* between meals. A saline draught should be taken the first thing on rising. For renal colic, give hyoscine and morphine, or glonoin, hyoscyamine and strychnine. Cannabin and atropine have been highly extolled, but hyoscine and morphine is a more effective combination.

A radiograph revealing the size and location of the calculus should be secured, and if operation is desirable, the sooner the patient submits the better. As both renal and vesical calculi exist, the case is probably distinctly surgical.

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QUERY 5675.—“Pseudo Angina. Amenorrhea.” N. C. McL., Oklahoma, presents the following clinical data and requests assistance:

1. “Girl, 12 years old. Temperature, normal; pulse, 80; eats breakfast and dinner regularly, but misses her supper on account of pain located around heart. Commencing at 5 p. m. and 5 a. m., each attack lasts from ten to twenty minutes. Child suffers torture for two or three hours, then she gradually gets easy and goes to sleep; in ten or twenty minutes pain again wakes her up. She has been this way now for nine weeks and is no better. Pain during day is not severe. She is up and playing between attacks. Amyl nitrite, morphine, chloroform and antineuralgic tablets do not relieve her.

2. “Single lady, 25 years old (a school teacher, but not teaching for past year). Menstruated last nine months ago. General health is good, no cough, no fever, uterus normal no tumors or misplacement; can introduce probe or dilator without any trouble. ‘Emmenagog’ tablets do not produce results.”

Nine months is a long time for a normal and healthy woman to pass without signs of menstruation, and we fear some serious systemic disturbance exists. Are you sure there is no tuberculous tendency? What is the family history? Has there been any loss of weight or any progressive anemia? What is the rate and quality of pulse? What does a physical examination reveal? Make the Von Pirquet test.

In the meantime we suggest the exhibition of defibrinized bovine blood with Buckley's uterine tonic three times daily. The triple arsenates (preferably with nuclein) may well be given after meals. A nutritious diet, hot sitz bath, saline enemata, deep breathing and plenty of outdoor exercise will of course prove beneficial.

Do not forget that some women of pronounced mentality and nervous type cease to

menstruate under strain, and do not forget that these patients are the very ones who are apt to use opiates in some form. In such cases the menses may be suppressed.

We are especially interested in your case of “pseudoangina.” The conditions here are peculiar and we are unable to offer a positive diagnosis, though you probably have to deal with a functional cardiopathy.

The thing is to find out the exciting cause. Do we understand that the temperature is normal and the pulse 80 during the attack? Is there any cyanosis, coldness of the extremities, syncope, etc.? Has the child recently had any acute disease—pneumonia, scarlet-fever? Does examination reveal any sign of a pericarditis? How are the bowels and digestion, and what is the disposition of the patient? Note particularly the heart-sounds, quality of pulse and color of the mucosa. Think of rheumatic complications and uric acid diathesis.

We should be inclined to give this child, on general principles (and *pro tem.* only), cactin, gr. 1-67; aconitine, gr. 1-134; strychnine arsenate, gr. 1-67, morning, noon and night. Improve digestion and assimilation. Oversee diet and order salt sponge-baths followed by friction each night. Glonoin alone or combined with hyoscyamine and strychnine during the attack.

We should not use chloroform, while the usual “antineuralgic” compounds are rather too powerful for a patient of this type. A positive undersanding of conditions will alone enable us to outline treatment.

A colleague suggests that any pain resisting the powerful remedies names must be of a strangulative type, aroused, probably, when the food-mass reaches a certain point, a duodenal ulcer or impacted foreign body. The symptoms, he thinks, point to a digestive-canal lesion, and he suggests that the girl be put on an absolutely fluid diet, with colonic flushings, repeated for a week. Is there any jaundice, or blood in the stools? These suggestions may prove helpful. If we can exclude the usual causes of periodicity (malaria, rheumatism, syphilis) we come back to functional nerve disturbances as the probable factor. This child being at the age when menstrual life is beginning, we must also consider the pelvic organs.



2-6'

HERE is no more earnest student of the medico-economic and medico-sociologic problems, which are now of such vital interest to our profession, than Dr. W. J. Robinson of New York. He it was who initiated the modern movement for the reform of our medicinal therapy, by uncovering and denouncing the nostrum frauds; he has made a fearless, outspoken campaign for an honest and rational handling of the vital problems of the sex relation; and now he is beginning a new campaign, in which "Clinical Medicine" joins with all heart and energy, for the defense of our common profession against the assaults of quackery. There is no more trenchant writer, no more striking personality, than Dr. Robinson, and as publisher of magazines and books, as editor and writer, as well as medical practitioner, he is today one of the most interesting and most powerful figures in American medicine.



Wm J. Robinson, M.D.

EDITOR OF THE CRITIC AND GUIDE, THERAPEUTIC MEDICINE, THE MEDICAL REVIEW
OF REVIEWS, AND THE AMERICAN JOURNAL OF UROLOGY



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“Guts”

THE ancients fixed upon the heart as the seat of the affections; the kidneys as the seat of the passions; the liver, with its secretion of “black bile,” as the source of melancholy (the ordinary secretion of this gland making a person simply “choleric”); the spleen was responsible for “ill humor” or bad temper; while from the bowels came the sentiments of pity, kindness and tenderness, which made them, in very deed, “bowels of mercy.”

It was left for a later date to show that the bowels possessed another and equally desirable attribute, and a stronger term was required to express it. The word “bowel,” meaning a “sausage,” spoke too strongly of the peaceful arts of domesticity; the more expressive Anglo-Saxon word, “guts,” meaning to “pour,” suggested the pouring forth of warlike hordes, the clash of arms, the struggle for life or for death, so pleasingly mirrored in the combat incessantly waged in the tortuous passages, the *primæ viæ*, which traverse all human flesh.

If a man had “guts,” he was a fighting man, one who could be depended upon in an emergency, blessed with the trinity of blood, brains and belly, each symbolic of the qualities so essential then (and now) to one who would fight (and win) his battles.

I like that word “guts.” To me it carries no hint of vulgarity. It is a strong word, well suited to the use of strong men. A man who has guts is quite a different individual from one merely possessed of an “alimentary canal,” or “intestines.” He is a man to be considered, measured, reasoned with, respected. In the face of physical danger he is afflicted with no disastrous hypotension of the striped or unstriped muscles; when the moral crises of life come upon him he reveals no spiritual weakness through a frothy issue of words; though on occasion he is as strong in expression as he is in silence.

The man of guts is a man of action. Life to him means doing things. He glories in struggles, since struggle is the price paid for achievement. He is not afraid of danger, though he does not court it unwisely. He has courage, determination, discretion, judgment, nerve!

I like to run up against a doctor who has “guts.” When an emergency comes, such a man is not stampeded, even though it be the supreme test of his professional career and the way he meets it may determine his whole future. He directs the activities of the sick-room quietly, but with all the decisiveness of a general in the field. A slight pallor, a suggestion of unsteadiness of the hand, a tightening of the muscles about the mouth,

these are the only external indications of his inward anxiety; but he makes things hum, works, compels impeding obstacles to yield, and so succeeds.

Here is the doctor at the bedside. The sickroom is in disorder; anxiety is written on every face; the patient's condition reflects the fear of those around him. Something must be done, and at once.

He grasps the situation at a glance. Mary is set at work arranging poor Mrs. Smith's bed. John is ordered to build a fire, so as to provide hot water, Aunt Eliza sent to look for clean linen bandages, while Brother Ben gets together the utensils for the sterilization of the instruments. Everyone is soon doing the doctor's bidding, and under his quiet, directing hand the dread air of gloom yields to an atmosphere of hope, courage and confidence, and the battle is half won.

That night, when Brother Ben is telling all about the accident to those gathered around the roaring fire at the village store, he concludes his story with this telling remark:

"I like young Doc Jones. God! That fellow has guts!"

And you don't resent it a bit, as you otherwise would and should, when you hear that he called you "Doc!"

There are emergencies in life which mean more than victory in our first great case. Sometimes we may be placed face to face with a crisis when all the hopes and work of a lifetime are threatened with extinguishment—perhaps in a day or an hour. To yield may mean ruin, yet to fight seems vain. Which way shall we go? In whatever direction we turn, the way seems equally dark. Enemies confront us who wish openly and seek our ruin. Our weaker friends doubt us. Even the strong ones wonder—can it be so? Ah, Brother, if that time comes (and may it never come for you), pray God that you may have the strength to sweep back the rising tide of misfortune. Summon your moral reserves. Swear you haven't lost, and you are not going to lose! *Show them all that you have the "guts."*

We of the profession need to devote considerable attention to gut-development. Great problems are coming up, the right settlement of which demands wisdom and courage on our part. We shall not solve

these problems by slinking into the shadows, with the hope that the demons of ignorance and falsehood which we see all around may somehow fail to seize upon us, and therefore, we be saved from harm. Menacing dangers must be faced and overcome if the profession of medicine is to take its proper place in the world and obtain the recognition and receive the rewards which are, or should be, its by right. We must have the sense to see our own faults and the nerve to dissect them out. We must be aggressive, as well as optimistic, proving to the world that we deserve its support.

The whole profession of medicine needs "guts," every individual in that profession—you?

If your work is made more easy
By a friendly, helping hand,
Say so. Speak out brave and truly
Ere the darkness veil the land.
Should a brother workman dear
Falter for a word of cheer?

—George Stevens.

BEYOND THE BORDERS

This number of *CLINICAL MEDICINE* contains a large number of articles concerning medical practice outside of the United States, and most of these have been are written by physicians who, themselves, live "beyond the borders." We are receiving such articles nearly every month. It occurred to us last fall that it might be a good plan to get these together in a single number. We accordingly have been saving them up, and in addition, have asked and secured the cooperation of a few other of our foreign readers. The result is an issue of our journal which we believe unique in the annals of medical journalism.

Perhaps no medical journal published in this country has so many foreign readers as *CLINICAL MEDICINE*. It goes veritably to Europe, Asia, Africa, South and Central America, and to the "islands of the seas." Wherever there are physicians who can read the English language, there our journal is to be found and its influence is felt.

Several of the articles appearing in this number are written by medical missionaries. We have many of this class on our list, men and women who represent all Christian faiths. *CLINICAL MEDICINE* and alkaloidal

medication are both popular with missionary physicians, the first because its special aim is to give the maximum of help, the second because the active principles represent the maximum of drug efficiency with the minimum of space, this meaning economy in transportation and ease of carriage plus results.

If there is one fact that a number like this serves to emphasize, it is this—that the therapeutic movement which we represent is a world movement, limited to no one nation and no special class. It is spreading inevitably, because it is logically sound and morally right.

THE PHARMACODYNAMICS OF DIGITALIS AND ITS PRINCIPLES

In *The Journal of the American Medical Association*, Hatcher contributes an interesting paper upon the pharmacodynamics of digitalis and its principles. One point particularly attracted my attention, namely, the statement that “the symptoms of toxic action resemble closely those which they are intended to relieve, and without unremitting care and watchfulness the toxic action of digitalis may be superadded to the effects of the cardiac disease, without the fact being recognized.”

This emphasizes a caution which I have recently given as to the reckless use of digitalis. It also shows the exceeding value of Burgreeve's method of employing potent drugs.

Beginning with a water-soluble preparation, which is quickly absorbed and quickly manifests its action, minute doses of digitalin may be given at brief intervals until the desired effect has been obtained; but since the water-soluble elements of the drug pass quickly out of the system, accumulation is not likely to occur. In this way overdoses and underdoses are absolutely avoided and no perils result. When, on the other hand, one takes a preparation the full effects of which are manifested only after about sixty hours, and administers this preparation in full doses three times a day, what are we to expect but disaster?

The average therapeutic dose of crystalline ouabain or of strophanthin by intravenous injection is about 1-2 milligram, or, according

to these gentlemen, the equivalent of 1-2 milligrams of digitoxin or of 4 cubic centimeters of a good tincture of digitalis. These therapists consider the clinical use of strophanthin by the mouth irrational, in the present state of knowledge. The absorption of digitalis also seems variable, but less so than that of strophanthus. Variability in the absorption and dosage of strophanthus explains why many clinicians praise the drug, while others condemn it as useless.

The phenomena of accumulation may be due to the accumulation of certain amounts of the drug retained in the alimentary canal and suddenly absorbed; nevertheless, there is a true summation of effects of the part already absorbed. Strophanthus shows cumulative effect much less than digitalis, while strophanthin is excreted rapidly.

All the digitalis bodies submitted to tests, including digitoxin, act almost instantaneously on the cat's heart after intravenous injection. The effects of ouabain, the glucoside of strophanthus, have been observed within two minutes. Digitoxin, the most insoluble principle of the group tested, may cause death within a few minutes. If the animal is given half the fatal dose of digitoxin by the vein, and half an hour later half the fatal dose of ouabain, death follows promptly; although, if ouabain alone is given, death is not immediate. Caffeine is also synergistic to the digitalis bodies, which fact should be remembered when any digitalis preparation is given to those who use large amounts of the caffeine-bearing beverages.

The pharmacologists referred to believe that the choice among the digitalis preparations is only a question of manner of administration. Oral administration will continue as the favorite method, but is not so accurate as intravenous or intramuscular injection. In acute cases the latter is preferable, as it alone offers certainty as to absorption. At the present time we have two pure digitalis principles available, crystalline ouabain and crystalline digitoxin. The former may be employed in sterile solution, but the latter being insoluble in water, these experimentalists conclude that ouabain deserves the preference in urgent cases; in which case it should be administered intravenously or intramuscularly. Both the

tincture and the infusion of digitalis represent the leaves fully, and they abandon the idea that the action of one differs from that of the other. None of these bodies exerts any appreciable effect on the gastrointestinal mucous membrane when administered by the mouth, although small doses of nearly all of them cause emesis and diarrhea when given subcutaneously.

While digitoxin is a powerful vasoconstrictor when isolated vessels are perfused with it, and strophanthin has little of this action, there is no satisfactory evidence, it is claimed, that marked vasoconstriction follows the therapeutic doses of digitoxin. This deduction, however, is absolutely meaningless, for many a physician has made clinical observations in his own practice amply sufficient to convince him of the reality of such vasoconstriction.

A warning is uttered by Dr. Hatcher against the use of preparations not standardized, as also against the intramuscular or intravenous use of ouabain or tincture of strophanthus, excepting in appropriate cases. These preparations are decidedly more active than digitalis when given in this way, though much less so when administered by the mouth.

Dr. Hatcher's paper closes with a warning to the effect that the brilliant results sometimes reported with the digitalis bodies can only be obtained at the risk of endangering the life of the patient; and that the full therapeutic action of these can not be elicited safely unless the practitioner is prepared to watch the patient with extremest care.

In the discussion following the reading of this paper, Dr. J. L. Miller stated that strophanthin sets up such intense irritation when given intramuscularly, that it must be objectionable when introduced into a vessel. To this Bailey replied that when deeply injected into the gluteal muscles in a solution of 1:6000, it is practically painless, especially if the parts are massaged for a few minutes.

Hatcher gave the daily dose of strophanthin as 1-2 milligram; if a full milligram be used the patient should be carefully watched. In comment, Litchfield stated that at Krause's clinic he saw patients treated intravenously with 1-milligram doses of

strophanthin, not repeated. The results were brilliant.

The most important part of this communication, however, occurs in the latter part of the discussion. Dr. Miller asked whether sterilization destroyed the activity of ouabain; and Hatcher replied that he had a grave disinclination to answer this question, saying, "It almost seems that everything one deduces from his experiments is upset later."

That tells the whole story! It proves the absolute insufficiency of such animal, or purely physiologic experiments, when taken alone, if the test of clinical observation later is not superadded. One should think that people got tired making the same old mistakes after they had been pointed out to them time and time again.

In the last issue of *The Journal*, Hatcher contributes a further study of cactus. He persists in the old way, endeavoring to show that "cactus does not replace digitalis;" and of testing cactus by physiologic experiments alone, instead of by observation of the effect following its administration in those cases for which it is advised.

No better illustration could be given of the futility of laboratory investigations when not corrected by bedside observation.

You cannot dream yourself into a character. You must hammer and forge yourself one.—Froude.

"HOBBLES"

"The river has become a hobble skirt to Chicago's development." This remark, made by one of our public men, set us to thinking on the general topic of hobbles, especially as they affect the medical profession—not meaning the fees resulting from the broken limbs and heads suffered by "hobbled" women!

No, we refer to the hobbles of precedent and authority which interfere so seriously with medical progress.

Take up any textbook. Open it almost anywhere. The author makes some statement as if it were an established fact. What is the basis for this statement? There seems to be none, so we try to hunt it down. We trace it back through book after book, until finally, somewhere back in the bibliographic

middle-ages, we find that some "professor" has observed such and such a phenomenon, following (perhaps) the administration of such and such a remedy. The "observation" became a "theory," and the theory is finally, universally, and unquestioningly accepted as a "fact."

Take that exploded notion that green apomorphine is dangerous. You will find it in most of the books on *materia medica*. Nobody seems to know where this bit of medical gossip started; and every succeeding writer has accepted it as gospel truth. Only a little clinical experience was needed to prove its absurdity; but until CLINICAL MEDICINE printed the fact that green apomorphine is safe and potent, no one had taken the trouble to look into the matter.

It only needs a cursory investigation of our textbooks to show that they are simply saturated with the misinformation of precedent. A segregated experience seems to be accepted without question, providing the original investigator happens to be a man of repute. On the other hand, it is the hardest thing in the world to get physicians having some scholastic reputation to investigate theories or methods which are lacking in the weight of precedent or the power of authority. The *big reforms* in medicine have never been accepted with open arms; in the majority of instances they have been forced upon us, against our will, against our "better judgment," from the outside.

We are "hobbled" by authority. While the power of precedent is (we hope) losing somewhat its hold upon us, the power of and reverence for authority is gaining ground. In the olden days representative prelates from all over Christendom met in "councils" to determine what "truth" was. They crystallized the theological opinions of their times into definite articles of faith, or creeds, and some of these creeds persist unchanged to the present time—and it is still heresy to refuse to believe them.

It is becoming the custom in medicine to delegate to others the delineation of medical truth. The findings of these men or groups of men, their hypotheses, their teachings are coming more and more to have the force of law, and to disagree with them is to be branded with heresy; this in spite of the fact

that every generation sweeps away or modifies the theories and methods of the generation that precedes it. It is a good thing to have "authorities"—by that word meaning men who devote special time and study to certain topics—but it is a bad thing for these men and for the profession as a whole to encourage the idea that their ideas must be accepted as finalities. The surest progress comes with freedom—freedom to think what we please, to do anything that does not endanger the lives or the best interests of others.

Isn't it absurd on the part of "authority" to say that we may use one salt of strychnine and not another salt; to teach the action and uses of one salt of quinine and not another?

For instance, someone has recently sent us a clipping quoting a certain well-known body that refuses recognition to strychnine arsenate because it is a compound of two very toxic substances. Somebody is afraid that if we give enough of one of these substances we may give too much or not enough of the other. Therefore, it is better to give strychnine and arsenic separately, in extemporaneous mixture—*q. e. d.*! In other words, this "authority," being unfamiliar with the action of strychnine arsenate, and apparently afraid of it, is unwilling that others should use it. Taboo! *Verboten!*

Why didn't said authority communicate with a few hundred of the many thousand physicians who *are* using and *have been* using strychnine arsenate for many years? He might possibly have learned that the arsenic action or the strychnine action is modified in the combination, somewhat as the arsenic is modified in action in Ehrlich's "606," even though not to the same degree. He might have learned that there were conditions in which a tonic action was obtainable from the arsenate that is not readily obtainable from other salts of strychnine.

But there is no record that he asked *any man who had used strychnine arsenate extensively*, what the latter thought about the drug. Why should he? *He* was the authority!

Hobbles!

FASHION NOTE.—Paris, Feb. 1. It is said that the hobble- and sheath-skirts will

not be extensively worn during 1911. Garments will be cut more full, so as to give more freedom of movement.

P. S. Perhaps fashions will change in America before long.

SUPPRESSION OF THE USE OF OPIUM IN CHINA

In 1908 the Chinese government took seriously to heart the question of suppressing the use of opium as a habit-drug in the Celestial Empire. A law was promulgated, by which each year one-tenth of the soil devoted to poppy culture should be cut off, so that an end would come to the production of opium in ten years. At the same time the users of opium were ordered to cut off one-tenth of the quantity they consumed each year. The government of India also agreed to reduce the export of opium from that country by one-tenth annually, in case after three years China could show that she had lived up to her program.

Attention once directed to the matter, public interest throughout China grew more acute, and it was determined to suppress entirely and at once the production of native opium, without reference to the ten-year period. The poppy fields have almost entirely disappeared from the provinces where the larger part of the crop was grown, and the decrease in the native production of opium has been variously estimated at from twenty-five to ninety percent.

The great obstacle at present to this reform is the need of the government of India for the revenue derived from the sale of Indian opium to China. The margin between income and expenditure in India is so close that the government is put in a serious predicament by cutting off this source of revenue. One result of the matter is a very high price for opium in China, due to the discontinuance of poppy cultivation. For this reason the imports of Indian opium have increased instead of diminished. The treaty obligations of China to India prevent the exclusion of this opium.

The International Reform Bureau (Inc.), whose headquarters are in Washington, D. C., is endeavoring to attract public at-

tention to this matter and to bring the force of publicity and of public opinion to bear upon the authorities of British India, in order to compel the latter to abrogate the treaties, and permit the full prohibition of the export of opium to China within one year. The Parliament of China strongly favors this reform, while the better element of its people throughout the empire likewise favors it.

It does seem as if, now that China seems to be awakening from the slumber of centuries, the public sentiment of the civilized world should enable her to complete this sadly needed reform, and relieve that nation of that black pall of darkness which had settled over so many millions of her people. The opportunity is a great one and should be embraced by every person who has in his or her heart the desire to benefit humanity and to assist in the elevation of the depressed sections of the human race.

How can we do this? We must bring this matter before societies, public meetings and legislatures, and send all the resolutions favoring the reform to the International Reform Bureau, 206 Pennsylvania Ave., S. E., Washington, D. C. This is one of the rare opportunities when public meetings and resolutions may be productive of genuine good.

Here are five good principles of action to be adopted: To benefit others without being lavish; to encourage labor without being harsh; to add to your resources without being covetous; to be dignified without being supercilious; and to inspire awe without being austere.—Confucius.

IMPORTANCE OF THE ILLINOIS FOOD COMMISSIONER

In *The American Food Journal* of January 15, appears the annual report of Hon. A. H. Jones, Illinois State Food Commissioner, and this report and the journal containing it should be in the hands of every householder of the entire country.

More than once we have called attention to the importance of this matter to every individual, for we all are concerned personally in seeing that we get the worth of our money expended for food, that we get the food we think we are buying, in proper, wholesome condition and in full

weight. That this is not likely to be the case is shown by Col. Jones in his report.

Out of more than 8000 samples of food intended for human consumption, 2057 did not conform to the law. That this work has not interfered with legitimate business, is shown by the fact that the production, manufacture and sale of food-products in Illinois exceeded that of any previous year, and the quality was generally better.

Yet in nearly every line of food-products there is adulteration. Many articles are sold under names that are not justified, while many others are represented as pure high-grade products, when in fact they are mixed with those of a much lower standard or are adulterated with articles of a foreign nature not infrequently injurious to health.

In the matter of production of dairy products, Illinois holds first place among the States, and these have increased twenty-five percent since the organization of the State Food Department ten years ago. During this period especial attention has been given to condenseries and creameries; but as yet the foundation of the business has not been reached at the dairy farm, where much work remains to be done. Thus diseased herds should be weeded out, barns be made warmer, ventilated and better lighted, for more profitable milk production, the milk cared for under more sanitary conditions. If the milk from each cow were tested, many farmers would find they were supporting animals which are not earning their keep.

Staple articles of food have also proved of higher grade than ever before. But still there is far too much unsanitary food to be found on the markets. The difficulty is that the retailers and the consumers themselves do not look after these matters, and this is partly the fault of the state authorities, in that no effective means have been taken to bring their work before the householder. But very little, if anything, of this creeps into the newspapers—the manufacturers of foods are apt to be “good advertisers.”

The Commissioners are asking for a new sanative law, which will increase their power of enforcing sanitation, by extending their supervision over factories, dairies, retail stores, restaurants, bakeries, cheap

hotels, and especially the country slaughter houses, which are probably as bad as they well could be; and in this they should receive the hearty support of the people.

The importance of the work may be realized from the fact that the State of Illinois has 16,000 retail groceries, 4000 manufacturing places for foods, 1000 creameries, milk condenseries and bottling plants, and the enormous number of 300,000 dairies; while, in addition, Chicago is the largest food-distributing city in the world.

Certainly it is heaven upon earth to have a man's mind moved in charity, rest in Providence, and turn upon the poles of truth.—Bacon.

CONVICTIONS UNDER THE PURE FOOD ACT

Recent prosecutions under the Food and Drugs Act resulted as follows: Bishop & Co., of Los Angeles; loganberry and strawberry jams condemned because they contained glucose instead of sugar. C. W. Sherman of Vermont: maple syrup condemned as containing too much water. J. Weller Co. of Cincinnati: catsup condemned as “putrid and decomposed.” Quaker Oats Company: Scotch oats condemned because it was not “Scotch.” Curiously enough the prosecutor failed to take note that the Company was not exclusively composed of Quakers, and hence the label was to that extent fraudulent and with intent to deceive by trading on the reputation of that worthy sect for probity and fair dealing. The Leroux Company of Toledo: cider vinegar that was not cider vinegar but an imitation. C. H. Weaver & Co. of Chicago: evaporated eggs in a “decomposed, filthy and putrid condition.” New Blue Grass Canning Company of Kentucky: catsup “filthy and decomposed.” Failing-Nellis Drug Company: failed to note on the labels of their headache cure the presence of acetanilid in it, and said it was safe and efficient, when it was neither safe nor efficient.

But the big fish of this draw was our old friend Radam with his microbe killer. He claimed that it would cure any disease—all diseases. But the relentless Government cruelly said it would not cure any disease.

much less all. In this instance the manufacturer allowed the goods to be destroyed rather than pay the costs and give bond, which shows that the bottles and cases could not have been expensive.

Prosperity is not without many fears and distastes; and adversity is not without comforts and hopes. . . . Prosperity doth best discover vice, but adversity doth best discover virtue.—Lord Bacon.

THE PUBLIC HEALTH SERVICE

An important bill, which we hope may become a law at this session of Congress, is one changing the name of the Public Health and Marine Hospital Service to the Public Health Service. This makes for simplicity, and the shorter name much more clearly describes the work of this important branch of the Government than the longer one, the United States Marine Hospitals, located in our seaports, representing only a comparatively small part of its official activities.

Under the wise and energetic management of Surgeon-General Wyman, the Public Health Service is constantly getting bigger, broader and more efficient. Not only is it charged with the active work of the Government to prevent the entrance and spread of epidemic and infectious diseases within our borders, but within recent years it has taken up the study of etiology and treatment; the research work done by the laboratories of the Service is of a high order and is constantly being extended into new and important channels. How many doctors, for instance, realize that the Government, through this efficient branch, has supervision of the manufacture of the biologic products used in the treatment of human disease?

The new bill provides that "The Public Health Service may study and investigate the diseases of man and conditions influencing the propagation and spread thereof, including sanitation and sewage and the pollution, either directly or indirectly, of the navigable streams and lakes of the United States, and it may from time to time issue information in the form of publications for the use of the public."

This added power will make it possible for the Service to do for the public health what the Agricultural Department is doing,

so effectively, for the farming and stock-growing interests of the country, i. e., disseminate helpful information—educate the people.

To state the fact briefly, the Public Health Service is growing in a perfectly *natural* way, and it is not only logical but right that it should receive the recognition which it has earned. Isn't it, on the whole, far better for the Government to recognize and develop the forces which it has already created, and the men who have been trained for years and shown their power in many a strenuous campaign with disease, rather than to create new bodies, to be officered by new men? While a Department of Health is a beautiful ideal, the Public Health Service is a *fact*, and its officers are an exceedingly efficient body of men, who richly deserve the slight increases in salary which are provided for in this bill. We hope that it may become a law.

THE WORK OF THE COUNCIL OF PHARMACY AND CHEMISTRY

In *Science* for December 23, Prof. John H. Long contributes an interesting summary of the work of himself and his colleagues in the Council of Pharmacy and Chemistry. He speaks of the rise of therapeutic nihilism, the consequent development of the patent medicines and proprietaries, and of the German synthetics, of which latter he says: "That a new remedy hailed from Germany, and that its use was backed up by the favorable opinion of almost any doctor of that country, was considered sufficient to justify its use here, where therapeutic experimentation had sunk to the level of trying almost everything which came along."

The opposition of a group of St. Louis manufacturers is touched upon caustically. Copyrighted remedies as distinguished from patents receive similar attention. Prof. Long acknowledges that the work of the Council is not above reproach, and that they have admitted to their new and nonofficial remedies some preparations which might have been omitted. He promises conditionally that the Council will have something to say on the extracts of malt and predigested foods.

Prof. Long is certainly long on sarcasm. He predicts that the success of atoxyl will open the way to a flood of aromatic arsenicals, especially since "606" has scored an even greater success. We are disappointed, however, that he does not declare himself as adverse to the unblushing commercialism with which "606" is exploited. No American physician would be listened to for one moment, were he to announce a secret, patented or otherwise monopolized remedy as possessed of such qualities as are claimed for "606;" but coming from a German, not so much as a whisper of condemnation is heard.

Further along the writer takes up the work of the Council upon old remedies, and endeavors to secure constancy or uniformity in galenic preparations by chemical assay. He says: "It must be remembered that crude drugs differ, as do gold mines; some are rich and some are poor in the thing desired."

He then speaks of the tendency to replace the uncertain plant preparations by definite weight of the active principle present, but fails to give any good reason why the clean alkaloid should be put back into the useless and encumbering excipient from which it was extracted, there to decompose and renew the ancient uncertainty.

The future importance of the study of the relation between intimate chemical structure and physiologic action is mentioned.

Altogether, although we feel disposed to criticize the Council in some of the work it has done, and more so in the manner in which that work has been conducted in some respects, taken as a whole, it has been of immense importance to the medical profession and to the community. These men have cleared the ground of much encumbering débris, and have even laid the foundation for important constructive work.

Two things should be avoided in our attitude toward the Council, first, the tendency to unsparing condemnation on account of mistakes they have made, second, the tendency to a still more dangerous blind and unqualified approval. One may survive much condemnation, and if merited, it is good for the soul; but no living man is so superior in his mental qualifications that he can withstand indiscriminate and universal

commendation. Few, if any, persons like to be told of their faults, yet in years to come their attitude toward the critic will surely be modified, and in time, if they have sufficient mental acumen, they will learn to acknowledge their indebtedness to just and fearless criticism.

He who conquers others is strong, but he who conquers himself is mighty.

WHY THE RICH MAN DIED

Many of us were shocked to hear of the death of Paul Morton, president of the Equitable Life Insurance Company, and formerly a member of President Roosevelt's cabinet. Morton was comparatively a young man, and supposed to be a man of excellent habits, abstemious, clean in his living, free from bad habits or any of the enervating social vices. Theoretically he should have lived to a good old age. His demise again illustrates how the enormous strain of modern business life is sapping individual vitality and cutting short the lives of our great captains of industry, more and more of whom are passing out in early middle life.

It is autotoxemia that is killing these men, and this is directly induced by the never ceasing tension which is characteristic of and almost essential to their vocations. They carry loads of anxiety of which the ordinary man and woman can have absolutely no conception, and they carry these all the time, in too many cases day and night. As a necessary part of their strenuous cerebral activity there is continuous congestion and disturbed or exaggerated function of the nerve-centers; the blood is drained from the visceral areas, and the digestive secretions become sluggish, the work of stomach and bowels is poorly performed, the food-substances ferment or putrefy; and there is thrown into the circulation a constant stream of poison, which, added to the toxins directly generated by fatigue and overstrain, sooner or later produce degeneration at some *locus minoris resistentiae*, "as surely as night follows day."

There is a deposit of connective tissue in the arteries—arteriosclerosis, a giving way of the terminal vessels in the kidney or brain, possible degeneration of the heart-muscle, resulting from the lessened elasticity of the

weakened coronary arteries. As a result the man is struck down without warning under some special stress or unusual excitement, and dies in the harness.

It is all very well to advise these men to change their mode of life "before it is too late;" there are some of us who know that it is easier to give this advice than it is to get men to follow it. The business man who holds in his hands the reins of a great industry can not easily throw them down, and duty, pride or ambition usually impels him to hold on until the end.

This much the physician can do to prevent disease in these men or arrest it before it is too late: There is a stage in the development of these degenerations from business strain when they are purely functional. If they are taken at this time they can be arrested and the individual cured. The condition is easily determined by the modern clinical laboratory. Through its help the discriminating physician can ascertain the perfection of digestion and learn how well or how poorly the eliminative organs are doing their work. Putrefactive changes are easily determined by an examination of the urine for indican, while tests for urinary acidity and for the elimination of solids reveal certain vices of metabolism.

The captain of industry, big or little, needs constant medical supervision. A careful adjustment of his diet, limitation of or inhibition of the use of tobacco or alcohol, fewer hours of work and more hours of sleep, regulation of the quantity and character of exercise, with especial attention to the toilet of the bowel, also to the arterial tension—all these, well looked after by a conscientious practitioner, may make it possible for him to prolong his activities, unimpaired, beyond the scriptural three score years and ten.

It is said that the average length of human life is increasing. This statement is only partially true, and it conceals a danger. Science is saving the babies, arresting the ravages of the contagious and infectious maladies, and in this way cutting down the mortality-rate. But we all know, if we stop to think about it, that the life of the *individual man and woman* is not growing longer. As society becomes more complex and competi-

tion more intense there is an increase in *strain*, manifested by a constant crawling up of the number of deaths due to degenerative disease. Thousands and thousands of the strongest men of our nation are passing away in middle life—men who are or should be at the acme of their productive capacity, and whom we can not well spare. To this class the thoughtful physician will devote an increasing amount of his attention, and he will himself be well repaid.

Live by that part of your soul which is conscious of being immortal, which does not fear death. That part of the soul is love.—Tolstoy.

WHY PEOPLE DO THINGS *

Possessing my fair share of curiosity, I like to know the why of things as well as the facts. For instance, I once undertook to ascertain why the morphine habitué took steps to get rid of his slavery at some particular time rather than at any other; and came to the conclusion that it was because of certain internal premonitions of an impending fatal break-up, and that if he disregarded these, his death might soon be expected.

But such a momentous reason is not always to be found when a man decides to rid himself of some abnormality he has endured for years, and the real cause of his getting into action may be much less weighty.

Now, there was old Jimmy Mathers. He had carried on his back, between his scapulæ, a fatty tumor the size of a coconut, for many years—so long that the tumor and Mathers had become indissolubly welded in the popular mind, and we could no more have formed a mental picture of Mathers without that lipoma than of Abe Keck sober or Kinse Pew with a clean face.

But one day Jimmy got into a fight with John Donahue, and in the height of the engagement the little Irishman called Mathers a "damned old dromedary." The shot went home. Mathers spent a troubled night, and next morning wired to Pittsburg for a surgeon to come and take away the tumor.

From such trivial and apparently inconsequential occurrences spring the movements

that overturn empires and alter the course of humanity.

"Tall oaks from little acorns grow,
Large streams from smallest fountains flow."

PERSECUTORY PARANOIA, AND THE MURDER OF DAVID GRAHAM PHILLIPS

The recent assassination of David Graham Phillips by a persecutory paranoiac (whose distorted logic accepted the parvenue hero of "Fashionable Adventures of Josuah Craig" for a picture of himself, and with still more distorted logic took the heroine for a picture of his sister) illustrates a great social danger which sensational newspaper outcry against psychiatric diagnosis tends to create.

If, as the newspaper fakers claim, a paranoiac is sane enough to be punished, then he can not be denied the right to be at large. Meanwhile, obviously, the inoffensive law-abiding citizen suffers in consequence.

The brutal way in which many newspapers adopted the paranoiac's theory (that Mr. Phillips had been guilty of their own sensational exploitation of family secrets for gain) demonstrates how little dependence can be placed on newspaper science, literature or sociology.

The paranoiac egocentric tendency is apparent to any sensible layman who comes in contact with a paranoiac. He reads himself into everything. His twisted, egocentric logic is more dangerous than maniacal or melancholic incoherence or the wild fury of transitory frenzy.

The paranoiac literary view of the assassin of Phillips is not unique. Nearly thirty years ago J. G. Kiernan, in *The Journal of Nervous and Mental Diseases* for 1882, reported the following case:

A man of illegitimate parentage received an excellent classical education, and at one time held a professorship in an academic college, which he suddenly abandoned to become a botanic physician. He had the occult tendency to charlatanism which marks the unbalanced. He wrote some works on alcoholophobiac physiology and hygiene, with the usual vegetarian trend.

These writings are still referred to by botanic physicians in England, the latest book in which he is quoted being "Diet Cure," written by T. L. Nichols, and published in 1881.

At that time this man had been eight years under insane-hospital care. He at length became convinced that the other botanic physicians, jealous of his skill and erudition, were attempting to poison him. So he gave up the practice of botanic medicine and secured a college tutorship, which eventually he also abandoned, to wander to and fro, almost starving himself, in the hope of avoiding poison. Finally he was transferred to the insane hospital.

At the asylum it was found that this patient had an oxycephalic, asymmetrical skull, with a flattened occiput and protruberant left frontal boss. He had markedly systematized delusions of persecution, evidently secondary to delusions of grandeur. Dickens wrote "Bleak House" in order to injure him because of his greater descriptive power. The way the book injured him was by calling attention to his illegitimacy. Dickens described an illegitimate child—Esther Hawdon—in it. This was intended as a hit at himself. He at one time had a very interesting conversation with the landscape gardener of Central Park. Immediately subsequent to this, the latter, jealous of his ability in landscape gardening, instigated the political intrigue which resulted in his being incarcerated in an insane hospital.

This patient further had various anomalous sensations, which he charged to poisons introduced into his system by his persecutors. At one time he believed that certain new abnormal sensations were produced by his enemies through the agency of electricity. His enemies employed as their agent a much-demented hebephreniac in the same ward who had shammed insanity in order to be near him. An assistant physician pointed out to him that according to known laws of physics such use of electricity was impossible.

The patient took a work on physics loaned by the physician, read it carefully, and returned it, stating he was fully convinced that he had been wrong about electricity; but still he kept at a suspicious distance from the hebephreniac, who, it was

ascertained, he now believed had bewitched him. On being asked how he, an educated man, could believe such nonsense, he said it must be true. According to the book lent him, it was impossible for electricity to have been used, and, inasmuch as from the time that his hebephreniac looked at him he had felt bad, his injuries must have come through witchcraft.

At one time the patient had the delusion that he had been impregnated by spermatozoa introduced into his system clandestinely. He often refused to shake hands for fear of contamination, but once while this delusion was in full sway he was visited by a former assistant whom he liked and in the surprise of his visit shook hands heartily.

This man had reverted to the suspiciousism and fetichism of primitive man. Meanwhile, while under such a mental state and in the insane hospital he got up a students' and scholars' edition of Horace which received high commendation from classicists. But despite all this classical ability, this man continued to remain a serious danger to the community. The application is self-evident.

He who knows other people is wise, but he who knows himself is wiser.

THE PRACTITIONERS' COLLEGE

We have been pleased to watch the growth of the Practitioners' College of this city, because it seems to represent the logical "next step" in postgraduate instruction. While we have a number of institutions of a similar character, whose work is in the main excellent and deserving of the highest praise, most of them have been defective in this—that the instruction given was largely without plan. The lectures are clinical, and the instructor takes the material that comes to hand, too often selecting the unique instead of the typical, and presents it to his class, variously elaborated upon and oratorically embellished. At the end of his six weeks' course the student has gained scattered, poorly arranged *facts* concerning medicine, but his fund of systematic knowledge is not largely increased.

The plan of the Practitioners' College, if we understand it aright, is to supply in-

struction primarily in the interest of the student rather than that of the teacher. This alone makes it different! It purposes to concentrate upon two points: diagnosis and treatment. Its instruction in the first will be laboratory in character and will fit the student-physician to do the routine chemical and microscopic work which have now become essential, but which received little attention in the days when he went to medical college. In other words, the instructors will aim to make the student a skilled diagnostician, familiar with all the modern methods.

As an earnest of the desire of the management of the College to supply therapeutic instruction of the highest order, it suffices to state that Dr. George F. Butler, so well known to readers of this journal, has been chosen President of the College. Dr. Butler's *specialty* is therapeutics, a subject which he has taught for many years. His book on "Materia Medica and Therapeutics" is a classic, in use in a very large percentage of the colleges of this country. Readers of CLINICAL MEDICINE do not need to be reminded of our own postgraduate correspondence course, of which he has charge. Dr. Butler will give special instruction in the Practitioners' College in the diseases of the kidneys (*both* kidneys, he tells us!) and of metabolism.

Our best wishes to President Butler and to the Practitioners College.

DUTIES OF THE CONSULTANT

In the course of a discussion upon the duties of the consultant, as printed in *The Medical Times* for February, Dr. Beverley Robinson makes some excellent remarks, to which we wish to give further currency. This is what he says:

"A thing quite worthy of note and which should be driven home and made cardinal principles with every thoroughly square consultant—i. e., that he should get the history of the patient as fully as possible from the family doctor; that he should examine the patient in every way, or as often as he really believes is required; but let him ventilate no personal views of the case to family or friends, and certainly never to the patient.

He may and should give his mature judgment and opinion as to diagnosis, prognosis and treatment to the practitioner, but at the same time adding, and mainly as regards treatment, that new or different treatment should be instituted only with the absolute approval of the man who must hold the fort—come weal, come woe—i. e., the family physician."

WHO OWNS THE PRESCRIPTION?

The question as to whom really belongs the doctor's written prescription always has been, and still remains, in spite of a few legal decisions, a perplexing one. Much has been written on the subject, the latest contribution being a paper read by J. Winchell of Cincinnati, at the late meeting of the American Pharmaceutical Association. The problem is presented by this author, quoted in *Merck's Report*, in a most excellent manner, and it is with pleasure we reproduce his final summing up of his arguments, as follows:

"The written prescription is a communication to any druggist to whom it may be presented. Therefore, it cannot be the property of the one for whom it is written, or of the one who presents it to the druggist.

"In the absence of special instructions, a prescription may be filled but once, as it is, presumably, designed to meet present conditions, and no other; and as it is written from the standpoint of a single individual, it may not be filled for more than that one.

"As a medical means, the prescription is solely the property of the physician, who devises it and expresses it in language.

"As the intermediary between the doctor and the druggist, it is simply a written communication, and follows the law of all communications. It, therefore, remains in the possession of the recipient. This fact is enforced by the fact that after the instructions of the communication are complied with as a medical means, the life of the prescription ceases and it is reduced to a simple communication.

"The conclusion of the whole matter is that after a prescription is once filled, it no longer can be considered as an authority, and takes the rank of a simple communication, being reduced to a simple record,

which should be filed by the one who carried out the instructions contained in the communication.

"This conclusion is borne out by the various laws with regard to the dispensing of certain poisons, notably cocaine, etc., and the specification of these certain things is due to the general recognition by the public of the danger of their indiscriminate use. When the time comes when the public realizes the danger in the indiscriminate refilling of prescriptions, laws will be passed by all states prohibiting:

"The refilling of any prescription for any but the one for whom it is written.

"The refilling of any prescription for anyone without the special order of the writer.

"The giving of a copy of any prescription, and requiring the keeping of all prescriptions filed as a matter of record.

"Such laws necessarily deny the right of ownership to the patient and the doctor as well as to the dispenser, but they vest the dispenser with the rights of custodian. And sooner or later to this complexion will we come, and the moss-grown question will be decided for good."

True politeness is perfect ease and freedom. It simply consists in treating others just as you like to be treated.—
Chesterfield.

DON'T FORGET TO ORDER YOUR INDEX

In the January number our subscribers were invited to request a copy of the Annual Index for CLINICAL MEDICINE, stating the reason why the same was not bound in the journal. The response, while generous, has not been as general as we wanted it to be, and so we once more call attention to it. Every subscriber, without exception, should have the Index; still, because of its size and added postage, it is not wisdom to send it to those not keeping our journals on file.

Of course, everyone should have his volumes of THE CLINIC bound; and so we repeat, that for the convenience of those not near some bookbinder, or not doing his own home binding, we will bind the journals for them for \$1.50 per volume, transportation both ways to be borne by the sender. At all events, keep your numbers in pasteboard or tin filing cases.

More than once we have reminded our readers of the *encyclopedic* value, as a work of reference, of a full and indexed file of CLINICAL MEDICINE; a fact fully attested by the numerous inquiries received concerning articles having appeared in THE CLINIC, the subscriber having failed to take our advice. And you all know that *in no other* publication is to be found so much of practical value, free from theorizing, to the everyday practitioner, as in CLINICAL MEDICINE.

With every year's work we have been endeavoring to improve the Index, as suggested by experience; but this year we are especially proud of it, for it is more perfect, complete, and accurate than ever. Two changes especially will recommend themselves to users, these being the separate classification of the Editorials and the Book Reviews. Readers will find this a great convenience in several respects. One other, and very important, improvement is the greater number of cross-references introduced, and notably those of synonymous terms and allied conditions.

And so we repeat, send your postal-card order for the 1910 Index.

THOSE WONDERFUL "EXPECTORANT" COUGH MIXTURES

In *Merck's Archives* for December, Sheffield contributes a typical example of the old-time prescription. It is an expectorant mixture. Of the five active ingredients it contains, ammonium carbonate stimulates the pulmonary tract and possibly slightly liquefies the discharge. Ipecacuahana increases the discharge, while tolu tends to check it. Squill and senega increase the cough.

Naturally, we should look for the further presence of a remedy acting to restrain the cough, and thus complete the juxtaposition of inherently antagonistic agents. Such an ingredient, strangely enough, does not appear in the prescription; however, the author of this pharmacologic conglomerate hastens to correct the unfortunate omission by adding, in a note, that a small quantity of camphorated tincture of opium or of dionin may be added to relieve pain and allay nerve irritation!

We thus have here the usual "expectorant" combination; remedies to increase and others to lessen the discharge, some to make the patient cough harder, and others to keep him from coughing so much. The result? Lord knows!

The least sentimental, the most profoundly practical teaching known to man, that working principle of which all mankind may live and, through working together, develop himself to the uttermost possibility, is none other than the Golden Rule.—Ray Stannard Baker.

VALUABLE FACTS ABOUT PELLAGRA

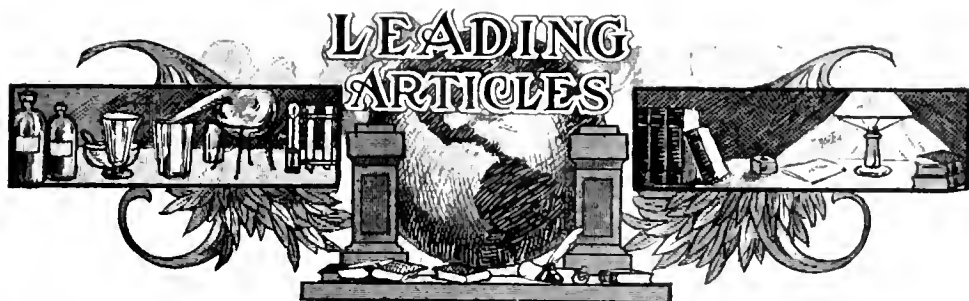
It would be difficult to find any paper upon pellagra which comprises in so brief a space so many valuable points as does the pamphlet before me, from the pen of Geo. A. Zeller, Superintendent of the Peoria State Hospital. Few physicians in the United States have the opportunities of seeing so much of pellagra as has Dr. Zeller, and none has made better use of his opportunities.

As to the cause of pellagra, Dr. Zeller is noncommittal, and in this he stands with the vast body of the medical profession. But his observations go far to negative the corn hypothesis. Furthermore, his description of the symptoms of the disease is so clear-cut and distinct that it would seem impossible for any physician who reads it to fail to recognize any case of the malady that may come before him.

Dr. Zeller has nothing whatever to say as to the treatment. This also is a matter in which his attitude is that of the majority of the profession. While proper treatment remains yet to be fixed, many suggestive contributions upon the subject have been made, among which we wish to direct special attention to several articles that appeared in the recent December number of CLINICAL MEDICINE.

COLCHICINE IN GOUT

According to "Merck's Annual Report" for 1909, Martinet regards colchicine as the best remedy for the relief of pain in gout, and that there is no medicinal substitute for this agent. With this opinion we heartily agree.



Scientific Medicine Versus Quackery*

Should Ignorant Laymen be Permitted to Treat the Sick

By WILLIAM J. ROBINSON, M. D., New York City

President of the American Society of Medical Sociology; Editor of *The Critic* and *Guide*, *The American Journal of Urology*, and *The Medical Review of Reviews*

EDITORIAL NOTE.—This address, which was delivered before The Brooklyn Philosophical Association, December 18, 1910, is the most forcible presentation we have ever seen of true, scientific medicine, as compared with quackery in all its forms. Not only should every physician read it carefully; he should also put it into the hands of other physicians, and be prepared to bring its irrefutable logic to the attention of the people of his own community.

II

Guesswork in Medicine

ANOTHER one of the accusations against us physicians is that medicine is not a science, but pure haphazard guesswork. As proof of this, our accusers offer the fact that, when a patient goes to two or more physicians and presents or feigns to each one the same symptoms, the prescriptions given by the several physicians will rarely or never be the same. A case came to my notice where a strenuous female reformer visited six physicians in one day, told them—so she claims—in the identical words, the trouble from which she was supposedly suffering, and got five prescriptions, of which no two were alike, while one of the six prescribed no drugs, advising hydrotherapy and massage.

Under the circumstances, this female reformer considered herself perfectly justified

in denouncing medicine as a humbug and the merest guesswork. She was sure that the physicians simply guessed and prescribed whatever came into their heads; this was the reason no two prescriptions were alike. If medicine were a real science, she argued, the same drugs would always be prescribed in the same condition. This not being the case, it follows that all the drugs are worse than useless.

The following reply rather knocked the bottom out of all this would-be reformer's argumentativeness. If a hungry man went into six different restaurants and ordered something to eat—anything that would satisfy his hunger, without specifications—would the waiters in each restaurant bring him exactly the same thing? Isn't it more than likely that the dishes would all be different—and would that prove that the food offered were worthless for the purpose of appeasing one's hunger? Of course not.

We have an analogous condition in the case of the different prescriptions. It simply shows that we have many drugs useful for the same diseased condition. Supposing

*This splendid address should receive the widest possible publicity among laymen. To facilitate this, the publishers of *CLINICAL MEDICINE* will reprint the article (when it is completed) in neat pamphlet form. These pamphlets will be sold at \$2.00 per 100. Every doctor who wishes to fight quackery should secure a supply and distribute them widely. Send in your orders today.

the physicians think that the patient needs a diuretic; one may prescribe sparteine, another theobromine, another squill and buchu, or potassium citrate, spirit of nitrous ether, and so on—different remedies to produce the same or a similar result.

But even if the medicines be of an entirely different character, belonging to different classes of remedies, that does not show that the treatment is not right.

For instance, let us suppose a patient suffering from a moderate degree of autointoxication. All agreeing that the emunctories must be stimulated, one physician may consider it proper to call upon the kidneys for more energetic work, and prescribe a diuretic; a second physician may prefer to stimulate the alimentary canal, and prescribe laxatives or cathartics; a third one may think it best to call into action that most important gland, the liver, and prescribe cholagogues; a fourth one may decide to cause the elimination of the toxins through the millions of skin-pores, and prescribe a diaphoretic; a fifth one may very wisely think it best to combine all the remedies in small quantities, and thus work at once on all the emunctories; a sixth one may not prescribe any drugs at all, preferring to obtain the same results—more slowly, but just as surely—through massage, hydrotherapy, gymnastics, walking, horseback riding, etc. Many different remedies, many different methods, but all equally efficient means toward the same end.

The noninformed layman gets bewildered, of course, on seeing such a multitude of different methods used for the same disease, but far from showing "guesswork," it demonstrates how rich and varied are our resources in some diseases.

It is silly and puerile, of course, to claim—as is done in some quarters—that medicine is at present an exact science. No, it is not. We are in the dark as to a good many points, and we have much, very, very much, yet to learn. But there is one thing that we should like the quacks, the quasi-reformers, and all other detractors of medicine, to remember:

There is a vast difference between not knowing everything about medicine, and knowing nothing about it!

"We Make Mistakes"

One of the commonest accusations against us is that we make mistakes. There is nothing that gives the common layman or the fake doctor so much delight as being able to point to a mistake committed by some regular physician. We do occasionally make mistakes in diagnosis, in prognosis and in treatment; yet, if you should compare the number of errors with the number of cases correctly diagnosed, rightly prognosed, and rightly treated, you would find the relative percentage of the former quite insignificant. And as we progress—for unlike the quacks, who never learn, we are making progress from year to year—that percentage is getting smaller and smaller apace.

But here is a point to which I wish to call your special attention. The fact that regular scientific physicians make mistakes is the *strongest* possible argument for the rigid regulation of the practice of medicine and the rigid elimination of the quack. For, if physicians who have received a scientific college training, who have had years of practice, who have various diagnostic instruments, who can get the aid of chemical, pathological and bacteriological laboratories, make mistakes, then what chance have the quacks got ever to make a right diagnosis, and consequently to apply the right treatment?

I believe I have answered all the principal objections offered by our enemies against scientific medicine. I now wish to make just one more remark.

Do not think that the opposition to scientific medicine is something peculiar, unique, unexplainable. No. It is part and parcel of the general obscurantist opposition to all science, to all progress.

In former years the opposition to astronomy was just as rabid: the astronomer was considered a wizard. Then there was opposition to anatomy, to chemistry; anatomists having to steal the bodies from the cemeteries at night, and the chemists, who were regarded as sorcerers, having to perform their experiments in secret, in their cellars, away from all human eyes.

Now the opposition has for its target scientific medicine, animal experimentation, and so forth. And of course, this opposition

is fostered deliberately by quacks who wish to be able to prey on the public, without having to undergo the trouble of studying and fitting themselves for the task of physicians. But we fear nothing. The chariot of progress can only be obstructed temporarily; it can never be stopped permanently.

The M. D. Degree and the Doctor Title in this Country

One of the misfortunes in matters medical in this country is, that with us the degree of M. D. and the title of Doctor do not stand for anything distinct and definite.

In France, in Germany, in Austria, in Switzerland, in Italy, even in the Czar-cursed Russia, the title of Doctor of Medicine means something very definite. While doctors there also differ in skill, knowledge and accomplishments, still you know at least that before a physician obtained the title of Doctor and the right to practise medicine, he had to go through a course which is essentially the same all over Europe. He had to go through a certain preliminary education—the public school, the gymnasium, lyceum or college—before he could enter upon his medical course. And after entering, he had to spend five years and pass a certain curriculum which is practically the same in all European universities.

While not every European graduate is a genius in medicine—not by any means—still, you can at least be sure that a perfect ignoramus he can not be. For he had to pass certain preliminary examinations, he had to spend a certain number of years in the theoretical study of medicine, he had to see and examine a certain number of patients in the clinics and hospitals, and he had to pass certain, and fairly difficult, tests, both of the university professors and of the state examiners.

Things are different in this country. While we have medical colleges which are equal, nay, superior to any in the world, we have also colleges (at least we have had until very recently) which are despicable frauds and which are unworthy of the name. Admitting, as they do, students without any preliminary education, demanding only two or three courses of five to six months each, without any laboratories, without any

hospital facilities—what knowledge of real medicine can graduates of such colleges have?

Furthermore, we must bear in mind that we have a number of physicians who have never been inside of a medical college, but who are licensed by the “years of practice” act. That is, when the laws regulating the practice of medicine were introduced in certain states, the men who had been calling themselves doctors and had been practising for five or ten years were permitted to continue to do so even though they had no diploma and had never attended a medical college.

But it is not necessary to go to the trouble of attending even a poor college or to go to the formality of having yourself licensed. If you are too ignorant or too lazy to obtain the degree of M. D., all you have to do is to take the next letter and call yourself N. D., which is supposed to stand for natural or naturopathic doctor. No paying out of money in tuition fees, no wasting time on anatomy, physiology, physics, chemistry, bacteriology, pathology, internal medicine, surgery, obstetrics, gynecology, neurology, psychiatry, ophthalmology, otology, rhinolaryngology, etc., etc. All you have to do is to say that you are a naturopathic doctor, and you are! It takes a fraction of a minute, merely as long as it takes to append the letters, N. D., to your name. It is fine! Or if, perchance, you do not wish to call yourself an N. D., call yourself anything else you please: panopath, mudopath, physical culturist, mental healer, food specialist, drugless physician, or anything else that may come to your mind. This is a free country.

Not that there are no quacks in other countries. Germany, for instance, is full of them. But they dare not deceive the public as to their standing. The assumption of the title of Doctor of Medicine or of Professor would promptly land the quack in jail. No, they must make it plain to the public that they are not physicians, so that when the public employs them, it does so at least with its eyes open.

For the protection of the public, and to prevent sailing under false colors, it is time that something be done in this country to make the title of Doctor of Medicine less

cheap, less vulgar. Not out of snobbery, but as matter of justice we demand that the title of Doctor be safeguarded, so that it may not be used with impunity by every quack and ignoramus, by every spectacle seller, by every corn cutter, by every Turkish-bath rubber.

The public is not able to discriminate, and cannot be expected to be. We cannot expect the people to look up every doctor's alma mater, and if they did, they cannot be expected to know which college is a reliable scientific institution and which is just a money-making diploma mill.

To the public all doctors are alike. When a protest is made against vaccination, or animal experimentation, or a federal bureau of health, or against any scientific research work, and the protest is signed by some "doctors," or M. D.'s, the public takes it all for pure coin and believes that one part of the medical profession is opposed to another part; and it is generally made to believe that it is the more liberal, the more progressive part that is opposed to the more conservative, more reactionary part.

The public does not know that an investigation would disclose that most, if not all, of the signers are either graduates of worthless diploma mills or are no graduates at all, that many have never practised medicine, or have given up the practice and are in the real-estate or stock and bond business, or are engaged in some other commercial pursuit, who will sign anything, only to get their names in print. I made such an investigation at one time, and the results were very curious indeed. It is time to have the public understand that not everybody who calls himself or signs himself "doctor" is a doctor.

We now come to our friends, the quacks. To enumerate all the kinds of quacks that our country is blessed with would take reams of paper and lots of time. Not that the subject is not worth it; the contrary is true. But it is too vast to be treated of fully in a fraction of a lecture. It needs a whole lecture, nay, several lectures to itself.

Christian Science

We will first take up Christian science, the greatest delusion of the times; the greatest insult to human intelligence; the strong-

est proof, if proof be needed, of our low intellectual standard, of the muddled condition of the brains of our citizens and citizenesses. Yes, people must have pretty empty skulls, if the miserable jumble of unintelligible drivel, enunciated by a paranoiac woman, is taken by our "cultured" classes as a novel philosophy or an inspired religion.

I have met some pretty radical people who adopt a sort of conciliatory attitude toward Christian science. "There is something in it," they will tell you, "there is some truth in it."

I condemn such a conciliatory, wishy-washy attitude most emphatically. *There is nothing in Christian science; there is no truth in it.* Whatever there is of a courageous, cheerful attitude in Christian science, is not peculiar to it; even the old physicians knew the value of cheerfulness very well; they cultivated it themselves and encouraged it in their patients.

As to what is peculiar to Christian science, that matter is nonexistent, that disease is only an error of the mind, that germs are a fiction, that the worst diseases can be cured by a jumbled-up prayer—all this is so stupid and false that I lose patience when confronted with the necessity of discussing it. These people also deny that morphine, strychnine, atropine, carbolic acid, hydrocyanic acid, any of these potent agents, possess poisonous properties "in themselves;" if they do kill, it is because the human *belief* in their poisonousness has imbued them with such property! But why they should kill people like the Christian scientists who deny their poisonousness, who in fact deny the very existence in drugs or any matter, is something that I could never understand. I have suggested to several Christian scientists who denied the reality of disease and of poisons to prove the courage of their convictions and permit me to inject them with the germs of diphtheria or tetanus or gonorrhea, or to take a 5-grain dose of morphine or strychnine or atropine—but so far not a single Christian scientist has accepted the challenge.

No, my friends, there is no use mincing words when speaking of Christian science. The whole thing is an insane delusion, and its very name is the most impudent prostitution of the holy name of science.

When a man tells you that he can, by thinking of you a thousand miles away, cure you of your heart disease, or of your stone in the bladder, or of a broken leg, or of corns, and you believe him—why, then you deserve to be defrauded. If you give your hard-earned money to such brazen fakers, then you deserve no sympathy. For while a man has a right to be stupid, he must not abuse the privilege. It is no use wasting more time on the absent-treatment healers. They are to be regarded as common frauds, bunco steerers, obtainers of money under false pretenses, and they should be treated accordingly.

Mental Healing

Whatever there is of suggestion in mental healing is taken from medicine; the rest is stuff and nonsense, and I regret very much to say that most of the healers are frauds and are in the healing business just for the money there is in it.

Here is a sample of the degree of mendacity to which these so-called mental healers can descend. The case is reported by one Horatio W. Dresser in a "New Thought" journal called *Practical Ideas*.

Once, when a young man lay dying with a tumor on the brain, says Mr. Dresser, it occurred to a member of his family to summon this spiritual healer. The young man had lost consciousness, apparently forever, the nearest kin were gathered around the bed, and the physicians had already departed, after giving up the case as hopeless. When the healer entered the room, she realized that here was a supreme opportunity and that she must rise to the occasion. Accordingly, she dismissed the family and, sitting by the bedside, rendered herself receptive in the manner known to therapists of Quimby's type. *She found that the soul, as she expressed it, had already in part separated from the body.* One less experienced, and with less composure, would have said that nothing could be done.

Plainly, it would have been absurd to make suggestions, for example, "You are healed," "You rule the body, and your bodily health is perfect." For intuition had revealed the real and critical situation, and actual work had got to be accomplished, as she would put it, in order to bring the soul back into adjustment, and carry away the tumor. The healer had never had a case of precisely this sort, but, proceeding as she had in other instances in which consciousness was restored, she, to use her description, gently brought the soul down into the body. This return of spiritual activity and normal adjustment was accompanied by the breaking of the tumor, the young man regained consciousness, and wholly recovered.

Now, what do you say to that? What conclusions should rational, sane people

draw from such a story? Is Mr. Dresser mentally unbalanced, or does he *know* that the thing is untrue, impossible, and deliberately, for an ulterior purpose, attempt to befog the minds of his readers and dupes? What will people, under present social conditions, not do, for the sake of making money, for the sake of gaining a livelihood? Some quacks will poison your body, others will corrupt your morals, and still others will weaken your mind and muddle your brain—all with the same object in view: to part the fool from his money.

Osteopathy

I am sorry to have to class this so-called system of medicine among the frauds, but I cannot help it. The truth, as one sees it, must be told, no matter who feels hurt. I say I am sorry to class osteopathy among the frauds, because so many osteopaths seem sincere, and I do not like to offend them. But I would call fraudulent any system of medicine which would assume one cause for all diseases and which would claim to cure all diseases by one method of treatment.

If a regular physician should claim to be able to treat all diseases by electricity, or hydrotherapy, or massage, or fresh air, or drugs, or any other single method, I should unhesitatingly call him a quack. A physician who claims that all diseases are due to *one* cause, for instance to improper diet, or to overeating, or to improper living in general, or to germs, would be a quack. And under this definition, the osteopaths are doubly quacks. For they claim but one cause of disease, namely, dislocation of the vertebrae and their impingement on nerves and tissues; and they claim to be able to treat all diseases by one method—by manipulating the vertebrae or other structures.

How typhoid fever, or pneumonia, or diphtheria, or an ulcer of the stomach, or a running ear, or a cataract, or gonorrhea, or syphilis, or scabies, or pus in the kidney, or a stone in the bladder, or a tumor of the uterus, or cancer of the breast can be caused by dislocations of the vertebrae and impingements, and how those diseases can be cured by manipulating those dislocations and impingements, is more than an ordinarily educated *sane* physician can understand.

Then, if those and hundreds of other diseases of a similar character are not so caused and cannot be so treated, but must have other methods of treatment, then it is impudent and mendacious on the part of the osteopaths to present their method of treatment as a *complete system of medicine and therapeutics*. Let them say that their method of treatment is useful in a few diseases, and that in those diseases it is superior to drugs, and we will have no quarrel with them. But to present it to the world as a real system of medicine, a great discovery, a new school superior to the old school—and to have many people take the pretenders' claims as pure coin—why, it merely demonstrates again the truth of Schiller's saying; and I am very much inclined to apply Carlyle's statement about England to our own country: "We have ninety-three million people, and most of them fools."

As to Cures Made by Quacks

When we criticize osteopathy (or similar cults) we are confronted with two arguments from its friends. The first is: "If osteopathy is a fake, why has it been licensed in so many states?" My answer is: Because the majority of the members of our state legislatures are ignorant. The second argument generally refers to some case that has been treated unsuccessfully by a regular physician but has been cured by an osteopath. Quite possible. There are certain conditions of strained muscles, weak backs, etc., in which a Turkish bath, massage or osteopathic manipulation will do good when drugs will fail. Should we, on account of that, consider Turkish baths, massage or osteopathy superior systems of medicine? Pshaw!

And as to osteopathic and similar cures, I should like to have you bear in mind this: When an osteopath, a chiropractor, a Christian scientist, or any other quack produces a cure, or an apparent cure, the thing is heralded about, advertised, spoken and written about, painted on thick, exaggerated, *ad nauseam*. We, the ordinary doctors, produce cures, actual cures, by the thousands; every day we discharge thousands of grateful patients as perfectly well, yet not a word is said or heard about it, because *it is expected*

of us. That's what we "are doctors for." But, reversely, when *we* fail to cure a patient, then the whole world hears about it—and we are put to scorn and derided.

Bear this in mind, please: The regular medical profession performs ten thousand cures to the one cure produced by the irregulars—but, then, the world hears nothing of these, our cures; its failures, however, are heralded about both by the patients and the irregular quacks.

Chiropractic

To the brazen humbug paraded as chiropractic I have on one occasion paid my respects in *The Critic and Guide*. It would hardly be worth while mentioning, because I cannot believe that any half-educated man would be taken in by those illiterate, ignorant quacks. But it is a fact that there is no limit to the ignorance of our legislators, and it is possible that out in the west they may yet get legal recognition. According to what I learned from their "literature," chiropractic is apparently a schism from osteopathy; some disgruntled osteopaths thought they could wield more influence and make more money by establishing a brand-new school of their own, and went and did so. But perhaps you may think I am prejudiced, so here is the definition of chiropractic, word for word, as given in their official journal (Vol. 4, No. 7—8). Please pay attention to the grammar:

Chiropractic is a philosophy of biology, theology, health, disease, death, the cause of disease and art of adjusting the relations between them to harmonious quantities and qualities, by hand, thus correcting all subluxations of the three hundred articulators of the human skeletal frame, more especially those of the spinal column, for the purpose of reestablishing the normal current through impinged nerves, as they emanate through intervertebral foramina, which were formerly excessive or lacking, named disease.

All movements, whether normal or abnormal, of, or in the body (including blood circulation), are but the personification of mental equivalents—mental functions guided by Innate Intelligence, creating physical expression. An ache or pain is but the Intellectual Inherent interpretation placed upon impressions received from the periphery proving the abnormal physical conditions.

Clear as mud, isn't it?

Perhaps you want to know something of the history of this marvelous system of medicine? Here it is and also in official language:

HISTORICAL: Chiropractic was discovered by D. D. Palmer, in September, 1895. His son, B. J. Palmer, D. C., Ph. C., has since that time developed it into a well defined non-therapeutic philosophy, science and art that has no resemblance whatever to any therapeutic method. Health is restored by reestablishments of mental currents induced by adjustments that are unique and unlike any movements used or taught by any other school.

And here is the entire pathology of chiropractic:

Diseases are caused by a *lack of current of Innate mental impulses*. This is produced by a constructing force placed around nerves through accidents—vertebral subluxations. These displacements are caused by a concussion of forces, the external meeting the resistance of the internal, induced by traumatism.

Simple, isn't it? Delightfully so. Throw away your Virchow, your Ziegler, your Hektoen. You can learn the pathology of all disease in thirty seconds by the watch.

And here is the entire philosophy of the chiropractic treatment in a nutshell:

Chiropractors use the spinous and other processes as handles to adjust displacements; by so doing they restore mental currents to normal transmission—and health exists.

And here is what one fakopractor writes in an article entitled "Justice to Where Justice is Due:"

From time to time some "Medical Scientist" with a long, badly twisted and unpronounceable name *thinks* he has "discovered" the cause of or a remedy for this, that or some other disease, and the whole medical world goes frantic over the "new discovery."

But it can truthfully be said that notwithstanding the years of hard work, constant and persevering effort to wrench from nature her secret—the cause of disease remained an impenetrable mystery, until the month of September, 1895, when D. D. Palmer, a humble citizen of Davenport, Iowa, a man of no medical education whatever, made the most important discovery of this or any other century, viz.: the cause of any and all disease and the way

to remove that cause, using nothing whatever but his hands.

To some people this may seem funny. To me it is terrible. It is terrible to contemplate that out-and-out ignoramuses, who cannot even write two English sentences correctly, can bamboozle thousands, tens of thousands of people, and permit them to tinker with their bodies, and endanger their lives.

Dietary Quacks

Just a word about them. Of course diet is an important item in the maintenance of health. However, the assertions of the dietary quacks to the contrary notwithstanding, but few diseases are directly traceable to errors in diet and but few diseases can be radically cured by changes in diet. But the most important thing is that those dietary quacks, some of whom are not even physicians, lack scientific education, have little knowledge or none, of chemistry and physiology, and are incompetent to give you any advice as to how to prevent or how to cure disease. The subject of diet in health and disease is now studied thoroughly by the medical profession, we have excellent original investigations and textbooks on the subject, and there is nothing the unlicensed quacks or the so-called diet doctors can teach you.

Keep away from the Thomases, Christians, and Tildens. They are liars; they cannot accomplish what they promise; and they may hurt you by preventing you from getting proper treatment at the proper time.

(To be Concluded)

A Parisian newspaper not so very long ago propounded the question, "Who were the ten greatest Frenchmen of the nineteenth century?" Fifteen million votes were recorded among the people. Who received the greatest number? Victor Hugo? No, though he stood second with 1,200,000; Napoleon? No, though he came fourth on the list. The first man received 1,300,000 votes—the physician, Pasteur. Yes, they have understanding and the sense of gratitude, these French people. For no other man in nineteenth century annals ever did so much for humankind as did Pasteur. It was he who demonstrated the germ theory of disease; and who declared it to be within human power to banish from the face of the earth all those infections which have throughout the centuries destroyed so much life, and caused untellable suffering. Yet great as was Pasteur in science, "the man in him transcended the scientist, and made him as beloved as he was eminent." Yes, the French people appreciate their greatest benefactor of a century, and give him first place among their heroes.—DIETETIC AND HYGIENIC GAZETTE.

"Surging" Through Africa

Or Medicine in the Dark Continent

By RALPH ST. J. PERRY, M. D., Parkers Prairie, Minnesota

ONCE upon a time, when just twenty-one years of age, I was unloaded, with a surgical equipment, upon the sandy beach of the Gulf of Guinea, where I was to serve as a medical missionary. Many people have said I was very young for such work—I plead guilty. But in my brief career up to that time I had served a year in a city dispensary, several months in a city hospital, and several months more as assistant to the late Dr. Joseph W. Marser, who was then the leading surgeon of his state and the most practical man in the field of industrial surgery I have ever known.

At that time antiseptic surgery was just emerging from the purulent débris of the older methods; Listerism was in the ascendancy, and Tait's aseptic methods and results were as yet unknown to most practitioners, and were looked upon by the few knowing ones as freaks of good fortune. The old-time surgical dresser was giving way before the surgical sterilizer. And into "Darkest Africa" I took an outfit for antiseptic surgery, and proceeded to "surge."

One morning, soon after my arrival, there came a messenger from twenty miles across the lake, asking me to go to Bendoo Station and attend a missionary who had been laid up for months with a sore leg. The trip was made in a large dugout canoe, with five Kroo boys as paddlers. Leaving home at seven in the morning, we reached Bendoo at noon, and there I found the Rev. Mr. Calley, of the Baptist Mission, in bed with a most beautiful erysipelatous leg, which he and his fellows and the natives had been trying to cure for seven months.

Calley was in bad shape, and without any ceremonies and *sans* anesthetic, I proceeded to open several abscesses, wash them with carbolized water, and dust with iodoform. The leg was then painted with white lead. Medicines were left to overcome the constitutional septic symptoms. One week later Calley was sufficiently improved

to be moved, as his leg was encased in a plaster-paris dressing, and he was brought down to the coast, and later shipped back to America.

This experience brought to my notice several of the native remedies, among which was the papaw poultice for chronic ulcers. This use of the papaw fruit (papaya) was reported by me in European and American medical journals, and later, when the inspissated juice of the papaw was exploited commercially as papoid, caroid, papain, etc., my little contribution to its surgical uses was not overlooked by the boosters.

There came to my office one day a native with quite a bulging in the anterior equatorial portion of his anatomy. This he told me was a "bust-nut." My own diagnosis, based upon an examination, was hydrocele. His appellation was derived from the native belief that the testicle had burst and allowed the urine to fill the scrotum. His "bust-nut" was tapped, exceeding thirty ounces of fluid being drawn off. Then four drams of tincture of iodine was injected, and the fellow discharged cured in ten days or so. This man's hydrocele represented the accumulations of nearly twenty years.

The news of his cure spread as if by wireless telegraphy; the glad tidings were sent broadcast that those who had been compelled to suffer because of scrotal distention could find relief at my office. First came a few doubting Thomases, who were rapidly converted into exultant, enthusiastic spreaders of my fame. Then they "came in droves;" every day a canoe would come from somewhere away back in the interior bearing a cargo of "bust-nuts," and before many weeks had passed we paraphrased a classic sentiment to read thus:

Count that day lost
Who's low descending sun
Sees in thy office
No bust-nut tapping done.

They came, the bust-nuts, of all sizes, shapes, ages and conditions; simple, complicated, single and double.

The first snag I ran against in this bust-nut stampede was the fact that the dermal pigment of the negro precluded the diagnostic test by transmitted light, which I had been taught was the essential diagnostic point. But this difficulty really was a blessing in disguise, for I learned to diagnose by the history, by ocular inspection, and by my tactile sense; it was A No. 1 training for the terminal filaments of my digital nerves. Records were kept of more than two hundred cases, and then attention was no longer paid to case-records unless some were unusual features involved.

A Case of Leprosy

The first leper I saw was July McCabe. He called upon me to treat a diseased leg, and after examining the limb I told him his only salvation was to have it amputated. The leprosy was not recognized, as I had never seen a case before, and I regarded it merely as a neglected gangrenous ulceration. The day was set for the operation, but when the sun arose that day I was laid up in bed with an attack of the African fever and so could not officiate. About ten o'clock in the morning I saw a funeral cortège wending its way over a near-by hill.

"Momo, whom are they burying this morning?"

"July McCabe."

Providence had intervened, and I escaped infection. Later, when I learned that McCabe was a leper, I was considerably jarred and at once studied up along that line. During the time spent after that on the Guinea Coast I examined and treated more than a hundred cases of leprosy in its various stages.

An Auto-Attack of the African Fever

For months after my arrival I escaped the "fever." I had seen my fellow missionaries sicken and die because they could not get away from that pestilential country; had seen them go down with the fever in the evening and carried out to the cemetery the next morning. Having had outdoor experience in America, I had come to Africa

well prepared to protect myself against exposure to bad weather, either hot or wet. But my time came.

One Sunday morning I tried to get up and found myself unable to arise. I looked my bed over to see whether any of the boys had been up to any tricks, but found nothing. Again I tried to get up, and again I failed. I called my native assistant.

"Jones, what's the matter with me," I asked, after explaining my symptoms.

"You got the fever."

"Pooh, I ain't got any fever, I'm as cool as a cucumber. Hand me my thermometer"—temperature 104.5° F., by a registered and corrected Hicks!

Everybody got busy, suddenly! A pill, or rather a bolus, containing 30 grains of quinine and 10 grains of salicylic acid was swallowed as quickly as Jones could get it ready; and the dose was repeated in one hour. Momo gave me cool sponge-baths every fifteen minutes. The native children of the mission school let out one long, continuous, mournful howl—my services, you see, had been panreligious. By and by my temperature dropped down to 101.5 degrees. The reader can take his pick as to which of the treatments did the work, but since then I have cured dozens of such cases by somewhat more humane and rather less vociferous methods, my chief weapon being quinine arsenate in very small doses.

After many repeated attacks of the fever, subsequently, one came along which laid me up, *hors de guerre*, for eight months. I decided to return to America before being tucked away under a palm tree. At the dock the last man to bid me farewell was my friend McKinney.

"Doc, whatch'u going home for anyway; your nerve petered out? Look at me; been here two years and never sick a day!"

Two weeks later McKinney took sick one night and died before morning.

Elephantiasis

Along with the hydrocelic horde that thronged my hospital betappery came many simulating cases, and among these were dozens of scrotums afflicted with elephantiasis. At first I was suffering with an acute hydrocelemania and so turned these men

aside, telling them I could do nothing for them. After a while, though, I recovered my senses, devised a suitable operation for removing the neoplastic growth, and proceeded to surge.

My patients were mostly Mohammedans and believers in the Old Testament, especially in the book of Deuteronomy (q. v.); hence it was essential that the operation should not destroy or mutilate their genital appendages. With the smaller growths there was practically no trouble, but when it came to scrotums weighing from fifty to seventy-five pounds, their reduction to reasonable size called for some rather unusual plastic geometry and patterning.

The operation, as eventually evolved, was described in *The Indiana Medical Journal*, in 1887, along with the report of my prize-case, in which I amputated a man from a tumor weighing one hundred and ten pounds. Cases of elephantiasis of the leg, labia majora, and breast were frequently encountered and operated upon.

Jimmie Hunter's Leg, and the Bug-a-Bugs

Jimmie Hunter was a native who procrastinated when the big tree was falling his way, and the result was that Jimmie had a leg smashed so as to involve the ankle. For two years he was carried around in a hammock with an open ulcerating wound and a loosely flapping foot. Then came the "white God-doctor." James was toted to the mission compound and stored away in a native house. For several days he was fed well and daily scrubbed with carbolyzed and corrosive-sublimated washings.

Then, one bright sunshiny morning, Jimmie was carried to the doctor's office and his leg cut off at the upper third—the first operation of the kind ever heard of in that country. The next day the dressings were changed, and everything looked so fine that I decided to let the second dressing stay on three days or longer, "p. r. n." But on the morning of the third day the native urchin who was acting as valet for Jimmie came running to my office and excitedly announced that the "bug-a-bugs" were eating Jimmie's leg off. "Bug-a-bugs" are known to entomology as white ants or termites, and they will eat anything that can

be masticated. Nevertheless, the idea that these voracious critters would essay to feed on carbolyzed and sublimated gauze seemed too utterly preposterous.

The entire office force rushed to the rescue; and, sure enough, we found a squad of termites conducting a culinary survey of what was left of Jimmie's leg. They were in and out and all over the dressings, and James swore he had felt them biting at his stump. However that may have been, the stump suppurated and had to be dressed in the old-fashioned way, for days, before it healed. Finally Mr. Hunter was around on crutches, which subsequently gave way to a peg-leg, and no man on the Guinea Coast was happier or more marveled at than he.

Introducing Ether Anesthesia and a Nerve-Racking Experience

When the announcement was made that I had a medicine which would put people to sleep so that I could cut them up without pain, after which they would wake up as good and lively as ever, my assertion was ridiculed with the superior disbelief of ignorance. Finally a Mohammedan chief or petty king brought a slave to me for an operation and consented to the use of the anesthetic. On being questioned, the slave told me it was his duty to obey his master and that he would submit to whatever I thought best.

Watched by more than two hundred wondering eyes, I put the man to sleep, performed my operation, and then let him awaken. He went through all the stages of excitement, quiescence, dead-to-the-world, and all, and the gaping multitude surely got its money's worth. Busy tongues spread the story abroad that "Bolyki" could kill people, cut them up while dead, and then bring them to life again.

Things went along fine and your humble servant was rapidly acquiring glory in huge chunks, when Kipopo came across the lake to be circumcized while "dead under the sleep medicine."

The boy had passed through the exciting stage and was apparently O. K. for operating, when suddenly he let out the most unearthly, ear-splitting, piercing yell I ever heard come from a human throat. Instantly everybody

broke for shelter and I was alone with my patient. Visions of deaths from ether rapidly piled up in front of my imagination, and for a few seconds I was the worst-rattled kid you ever saw.

Not knowing what had happened or what complication might have arisen, I let the boy come out from under the influence of the ether and asked him what ailed him. He told me he had dreamed he was up in a balloon and had suddenly fallen overboard. He was pacified, put to sleep again and operated on, but for several nights thereafter I would wake up in the night with the echo of that yell ringing in my ears.

Methods of Circumcision Improved

Speaking of circumcisions, that little operation is one of the rites of the Moham-medan church, just as in the Jewish, and is really more strictly enforced—with the exception that anyone may perform the operation.

When I began my work among the natives I found the operation done in the crudest way imaginable, with home-made instruments, and all the septic trimmings. Result: much pain and suffering, much lost time, frequently deformed penis, and occasionally a dead youth—*via* septicemia.

Up-to-date methods under anesthesia were introduced, and things changed, for now there was no more pain or suffering. Other results were: very little lost time, no deformed penes, no deaths, much joy among the young men of the country, besides a great rush of business in our circumcision department, the number of cases running up into the hundreds. Inasmuch as my successor in that particular field was a "hen medic," I often have pondered and wondered how the bust-nuts and prepuces have fared since my departure.

Jigger Sores and Yaws

One of the most pestiferous parasites encountered in the tropics is the sand-flea, or chigoe, commonly called "jigger" and "chigger" by the English-speaking people of tropics and subtropics. As is usual with such pests, it is the female who seeks uninvited possession of a portion of your anatomy, and the most frequently selected site of her

invasion is the foot, because that is the most easily accessible portion.

The African natives had no means of eradicating the brood excepting burnt palm-oil salve and plantain-leaf poultices—measures which were more palliative than curative. In my practice, iodoform was added to the native salve, and occasionally a little castor oil and balsam of Peru were used with the iodoform. Cleanliness was also insisted upon as a necessary adjunct.

In a few weeks we had healed up some remarkably bad cases of long standing, and then we were overrun with a crowd of sand-flea-infested humanity. One poor fellow, who was brought to us in a hammock, had been harboring successive and increasing generations of the pulex for over twenty years and was one grand ulcerating mass from scalp to soles. Already he had been suffering from septic poisoning, and before we could do anything to relieve him he was translated to another world.

With the flea-bitten came others also, and among these were the sufferers from yaws. At first I mistook yaws for "cat-boils," but soon discovered my error and began treating it as a distinct disease.

The theory was just then rampant that yaws was a form of syphilitic eruption, and so I put many patients on an antisymphilitic treatment. They progressed finely to a cure, but I saw so many cases where there was apparently no chance for syphilitic infection that I eventually attributed all cures to the alterative effects of the mercury and iodide, and ceased my guesses at the etiologic factor. Had I a chance today to go through this experience, I should like to try calcium sulphide in yaws.

About the Slugs and Pots' Feet, Used in Warfare

Because of the frequent intertribal wars and still more from the poor quality of the easily burst gun-barrel firearms sold by the Christian traders, there was a multiplicity of gunshot wounds. Furthermore, there being a scarcity of bullets and shot, other varieties of missiles were evolved. Pieces of lead pipe, solder and other plumbic etceteras were hammered out flat and then cut up into slugs; also the cute little feet were

knocked off of the iron pots and kettles and broken into bits. The wounds created by these irregular, rough-edged, and pointed missiles were wonderful and fearful to behold.

I have in my collection a goodly sized pot-foot that I removed from the immediate precordial region of a husky warrior—how he came to escape taking the leading part in a big tom-tom funeral, either after getting shot or getting operated upon, is a mystery. Also I enjoyed the experience of removing these foreign bodies from all and every part of the body—both the freshly penetrated and the old residents that had become encysted.

The Personal Equation in the Work

Most persons, as soon as they recover from their shock upon learning that I was once a missionary surgeon in Central Africa, ask: "What in the world did you go over there for?"

I have never tried to conceal my motive at any time: I went there because I wanted to see that part of the world, because I wanted the medical and surgical experience, because I thought I could do as much good there as any other man, and because I was not afraid to go.

I enjoyed many months of travel among the wildest parts of what was then an unexplored country, and incidentally included a sojourn in France and in Germany on my way home. To anyone who enjoys outdoor life, and is not afraid of "savage" people, such an opportunity means a great deal, especially if you happen to be a student of nature.

The medical experience was of a nature entirely different from what one meets in the United States: different diseases, different peoples, different remedies, different cus-

toms, and all that; and, yet, it imbued the young M. D. with an unwonted degree of confidence when he came to tackle medical work at home.

My surgical experience in wild Africa beat anything ever dreamed of then, or even now, when the whole country is crazy to be cut. The number and variety of surgical cases encountered and operated upon during the months I was in the field over there was more than the average practitioner in America would see in ten or even twenty years of ordinary practice.

Of course, many of these diseases were of a nature rarely seen in America (more common since the Spanish-American war), but the experience gave opportunity for cultivating technic and dexterity, acquiring wisdom and judgment, eliminating the rash enthusiasm of youth and replacing it with the conservatism of more mature experience—all this, and much more.

The Reward Is Ample

The stipend of the missionary (missionaries never receive salaries or wages or pay—just stipends) is not such as to cause one's pocket to bulge. Nevertheless, I think the experience one gets in the work fully makes up for the dollars not received and I should not hesitate to advise any healthy young graduate to enter the work. Religious zeal is not so much a requisite as are good health and a good education. Do not go into the work if you can not first pass an examination for a \$5,000 life-insurance policy—you can not get the insurance, under the circumstances, but it will show that you are physically shipshape. If you go into the tropics with a weakness or taint of any kind in your system, you can wager the peanut that your home minister will tearfully preach your memorial sermon ere long.



The Elizabeth Skelton Danforth Memorial Hospital at Kiu Kiang, China

By I. N. DANFORTH, A. M., M. D., Chicago, Illinois

Physician to the Monroe Street Hospital; Honorary Physician to St. Luke's Hospital; Consulting Physician to Mary Thompson Hospital, Wesley Hospital, and the Home for the Friendless, all of Chicago

THE city of Kiu Kiang, China, is about three hundred miles west of Shanghai as the crow flies, but nearly five hundred miles if we follow the windings of the Yang-tse River, on which Kiu Kiang lies. It is a city of approximately 100,000 inhabitants, almost entirely Chinese, but with a slight sprinkling of foreigners. It is very pleasantly situated, with attractive environs, and surrounded by easily accessible hills which furnish summer resorts both for sick and well, which is an invaluable feature.

In this city, on the large and commodious "compound" of the Woman's Foreign Missionary Society of the Methodist Episcopal Church, stands the Elizabeth Skelton Danforth Memorial Hospital. Its location is on ascending ground, about half a mile from the south bank of the river, and it has been singularly fortunate in the selection of its site, in its friends and sponsors, and in its immediate administration.

Elizabeth Skelton, The Patroness

Elizabeth Skelton, in memory of whom the hospital was named, was the wife of the present writer, being married in the summer of 1869. She died in the summer of 1895, the victim of that *bête noire* of medical science, pernicious anemia.

Very soon after her marriage, Mrs. Danforth became deeply interested in the work of the Woman's Foreign Missionary Society of the Methodist Episcopal Church, and especially in the work of the Northwestern Branch, of which she was vice-president at the time of her death, and would have been president if her strength would have permitted. She was also chairman of the medical committee, and thus became intimately related to the medical work, especially in oriental lands. During her administration, the work in China seemed to

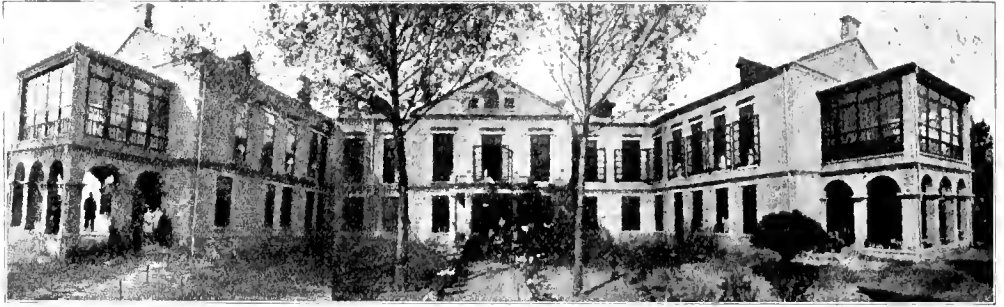
call for rather more attention than the work in other fields, and hence her thoughts were especially, and I think I may add, providentially, directed to the great needs of that vast country of ignorance, mystery and suffering.

Mrs. Danforth was quiet, reserved, thoughtful; endowed with excellent judgment, great executive ability, perfect self-command and a most winning personality. She was deeply religious, but not noisily and obtrusively "pious"—in fact, a character as nearly perfect as human frailties and human environments rarely permit.

A Permanent Memorial Suggested

Mrs. Danforth's loss was deeply felt by her sisters of the Missionary Society, and it ought to occasion no surprise that some of them desired to see a permanent memorial erected somewhere that should perpetuate her name and recognize her services. At this point I wish to enter a disclaimer. I was not the founder of the Danforth Hospital, nor was I the first one to suggest the enterprise. As is so often the case, the idea first took root in the brain of a woman—*"dux fœmina facti."*

Mrs. Abel Bliss, then a prominent member of the Northwestern Branch of the Woman's Foreign Missionary Society, seems to have been the first person to advocate the hospital, but she was immediately and most ably and heartily supported by Mrs. R. H. Pooley (Mrs. Danforth's niece), and the late lamented and beloved Mrs. Letitia Mason Quine. Of course, I myself have been rather intimately connected with the work of the hospital, in a sort of advisory capacity, the ladies who are its real managers having good-naturedly allowed me to play "second fiddle," without which no orchestra is complete.



The Elizabeth Skelton Danforth Memorial Hospital, Kiu Kiang, China

Some medical relief work had been carried on under many difficulties before the Danforth Hospital was contemplated, and Kiu Kiang was regarded as a strategic point for a larger and more permanent work. Hence it was decided that the memorial to Mrs. Danforth should be a dispensary for the treatment of transient or "out-patients," and that it should be located at Kiu Kiang.

Dr. Danforth Enters into the Work

At this point the ladies who had more immediate charge of the scheme, took me into their counsels. After anxious consultation and due consideration of the vital question of "ways and means," the ladies concluded that, with the additional financial help that I was able to offer, the dispensary plan could be broadened out, and a general hospital could be founded instead. And so the Elizabeth Skelton Danforth Memorial Hospital slowly took form, and on the 7th day of December, 1901, the administration building and the east wing were thrown open to patients, with appropriate dedicatory exercises, Bishop Moore presiding. The institution immediately entered upon a career of marvelous usefulness, every inch of space being occupied by medical and surgical cases, many of them coming from a long distance, almost always on foot.

But the demand for more room soon began to be imperative, and we, over here, began to hear the old familiar Macedonian cry, "Come over and help us." The Northwestern Branch responded nobly, other help came in, and at length the west wing was completed, and the Memorial Hospital stood forth a complete and finished work, with the one exception, that no hospital ever was

or ever will be a finished work until all progress ceases and our world becomes another moon; a silent, lifeless, frozen waste.

During the erection of the administration building and the east wing, the work was under the supervision of Miss Gertrude Howe, a missionary, a graduate of Michigan University and a wonderful example to the missionary worker of ability, patience and consecration. She has spent all of her active life in China, having been there more than forty years. It would be impossible to speak in detail of her work within the limits of this paper, or to speak of it at all adequately, without seeming to indulge in extravagant praise, but all the good she has done is known only to the recording angel.

Dr. Ida Kahn and Dr. Mary Stone

Associated with Miss Howe were Drs. Ida Kahn and Mary Stone, both "full-blooded" Chinese young women, both former students of Michigan University, and graduates of the medical department of the same institution, who gave promise of great usefulness, and have abundantly fulfilled that hope. Dr. Stone has Anglicized her Chinese name, while Dr. Kahn has Germanized hers, as both found their Chinese cognomens rather impracticable for use in correspondence with Americans and Europeans. I can neither spell nor pronounce nor understand either one of their "home-made" appellations.

Soon after the erection of the first two buildings, Miss Howe and Dr. Kahn went to a Chinese city about one hundred miles south of Kiu Kiang, called, I think, Nan Chang (although I do not warrant my spelling), to begin a new and identical work at that



Dr. Mary Stone and Dr. Ida Kahn

place. I regarded the removal of Miss Howe and Dr. Kahn from Kiu Kiang as a great mistake, and still hold the same opinion, but the Women's Foreign Missionary Society does not have to consult me as to its plans.

Dr. Kahn has developed into a most capable physician, and is now on her way back to China, after a year of supplementary study, partly at the Northwestern University and partly in London, for the purpose of opening a hospital in her new station. I have the highest appreciation of the invaluable services of Miss Gertrude Howe and Dr. Ida Kahn at Kiu Kiang, and desire now and here to record my personal gratitude to them both for their unselfish devotion to the interests of the Danforth Hospital,

and I may add that both their names are permanently affixed to rooms in the institution.

Dr. Stone Left Alone in Charge

Of course, the departure of Miss Howe and Dr. Kahn left the entire hospital resting on the slender shoulders of Dr. Mary Stone. It was a great responsibility for one of her years and apparently slight strength, and I confess that I very much feared she would be unequal to the burden. But I miscalculated.

Without any noise or blowing of trumpets, without a particle of overconfidence or "big-head" or ostentatious display of authority, this little mite of a Chinese woman assumed charge of the hospital; nor has she faltered for a single moment, except when she came to Chicago, two or three years ago, to have my son, Dr. W. C. Danforth, take out her sinful appendix. She soon returned to her work, and has been in excellent health ever since.

It will be impossible, in the limits to which this article must be confined, to describe with any kind of detail, the almost superhuman work which Dr. Stone is carrying on. She is surgeon and physician to the hospital, as well as to the dispensary connected with the hospital; furthermore, she does major operations in the department of gynecology without fear or embarrassment and with



The Nurses' Training Class



Miss Jennie Hughes, Principal of the Knowles Bible Training School which is in close connection with the Hospital, and Dr. Mary Stone, in charge of the Elizabeth Skelton Danforth Memorial Hospital, a woman of pure Chinese ancestry and of wonderful ability

results which would gratify the pride of our most successful operators. She examines and prescribes for an almost incredible number of patients, daily, in the wards and the dispensary; she conducts a nurses' training school in connection with the hospital, and has already graduated two or three classes of Chinese nurses, thoroughly qualified for their work. She is her own superintendent and "business manager," and every detail of management comes under her vigilant eye—and everyone conversant with hospital management knows what this means. I have been told many times by physicians who have visited the hospital and have seen Dr. Stone at her work, that her operative technic is ideal; that her trained Chinese

assistants are intelligent, quick and alert; that her operating room is kept in beautiful order; and that it is admirably equipped. I am also told that the whole hospital is scrupulously clean, and that system, order and discipline prevail everywhere.

Work for the Abolishment of Foot-binding and Promoting Philanthropies

But Dr. Stone's activities are not altogether confined to hospital work. She is vice-president of the National anti-foot-binding society, and has exerted a powerful influence in the work of abolishing that idiotic cruelty, foot-binding. It is an inflexible rule of the Danforth Hospital that admission to its wards means the abandonment of foot-binding for good and all, and many a child whose tiny feet were pinched and deformed by a mass of filthy bandages has been sent away, released from her torture, able for the first time to indulge in the frolics of happy childhood.

Perhaps the greatest and best work of the hospital is done among the poor, half-starved and half-clad children whose wan and wrinkled faces, so eloquent with suffering, appeal so pathetically to the doctor and nurses for relief and sympathy. The little Chinese girls, so often regarded as unwelcome intruders into the family, seem to appeal with irresistible force to Dr. Stone and her assistants; and hundreds of them will look back, in years to come, with hearts full of gratitude to the Danforth Hospital, and especially to Dr. Stone and her corps of nurses.

It is almost needless to say that religion, as exemplified and taught by the Crucified and Risen Lord, is the motive power which

impels and sustains Dr. Stone in her work. In fact, the whole atmosphere of the hospital is religious, in the best sense of the word, and therefore the crowning ambition of Dr. Mary Stone is to do all the good she can, physically, morally and spiritually, to her people who are so in need of help.

I wish I could say something about the closely related work of Miss Jennie Hughes, Miss Merrill and Miss Smith, who are conducting schools for girls and women very near the hospital and are very helpful to Dr. Stone, but space forbids. "I am loath to close," but the Editor is imperative and must be obeyed, yet I cannot help quoting a few words from *The Outlook* for January,

1910, relating the experience of Mr. Charles M. Dow of Jamestown, N. Y., when he visited the Danforth Hospital. This is what he said:

"In sailing down the Yangtse Kiang, our steamer stopped at Kiu Kiang for several hours, and on the invitation of Bishop Lewis, a fellow passenger, we visited the Methodist mission there. He promised, as a special inducement, that we should meet a remarkable Chinese surgeon. At the mission hospital, when the surgeon appeared from an operation, I was greatly surprised to find a small and very attractive native Chinese woman of thirty-five or thereabout—Dr. Mary Stone."

Some Chinese Obstetrical Practice

From the Experience of a Medical Missionary

By ANNA D. GLOSS, M. D., Peking, China

THE Chinese doctor does not practise obstetrics. Though he is so wise that he can tell whether a patient is pregnant or not by feeling her pulse, when it comes to the time of confinement all that he can do is to send medicine to her to increase the pains. What is in these medicines we do not know, but their variety and number are great. I have seen in a patient's house a pile of neat packages, making a pyramid six inches square at the base. All of these were to be cooked together in water and the fluid given at a single dose! Also, a Chinese fried-cake is scorched in a candle and eaten to increase the pain; and the shell of a tortoise is boiled in water, which is drunk for the same purpose. The bed-hangings are adorned with charms and prayers bought at a temple, all having the same end in view, yet still there is sometimes difficulty in the accouchement.

Fortunately for the population of China, the women, as a rule, have easy labors. I have myself seen the delivery of a very large child with practically no suffering to the mother. But when there is difficulty the suffering mother has no help. The Chinese midwife is the presiding genius on these occasions. She has no knowledge of anat-

omy, nor of obstetrics, nor of cleanliness. Any woman may be a midwife who has courage enough to take the cases.

These women differ in reputation, some being considered very skilful. They sometimes extort large sums of money from a family by telling the people that the case is a very difficult one and that they will only deliver the woman if given a certain sum in advance.

The Chinese midwife always has very long, dirty finger nails and never washes her hands until *after* an examination. This same dirty finger nail is her one obstetrical instrument. With it she may split the perineum back to the anus, cut gashes in the vaginal mucous membrane, or tear great holes in the child's scalp. She recognizes no hindrance to delivery except the size of the birth canal, and to enlarge this is the purpose of her frantic manipulations. The labiæ become swollen and tense. If the labor is prolonged a greatly distended bladder adds to the suffering, as the midwife does not know what a catheter is.

How the Woman is Delivered

As a rule the woman is delivered in a sitting or squatting position, most often on the

floor to save soiling the *kang*, or brick bed. The child is received in a basin, or on the brick floor. The midwife supports the patient from behind, pressing down upon the uterus with her arms, which are clasped tight about the abdomen. If the placenta does not come immediately after the child, the mother's hair is stuffed down her throat to make her gag. This is often quite effective, but if it fails the midwife pulls upon the cord until she accomplishes her purpose or the cord breaks. We saw one case where this had happened at the point of insertion in the placenta.

The delivery having been accomplished, the woman is kept in a sitting position by a pile of pillows, or more often resting against the relative, who patiently sits behind her. On no condition must she lie down for fear that the uterus will come up to her mouth or blood go to her head! She is given, immediately, a bowl of hot brown-sugar water and Chinese medicine. Sometimes she is made to drink the blood that flows with the placenta in order to insure her nursing the baby. It is with great difficulty that a patient can be made to lie down even when fainting from hemorrhage.

As soon as the baby is born, rice gruel and hard-boiled eggs are cooked for the mother. One kind mother-in-law of my acquaintance was so anxious to treat her daughter well that she fed her twelve hard-boiled eggs a day until she had to call in a doctor to treat the indigestion that followed.

In a case of transverse presentation, if the arm can be reached it is pulled upon until it gives way. Also vinegar and salt may be applied to the labiæ, while rhymes may be repeated calling upon the child to come forth, or some one may go upon the roof of the house and call the father's name, thus coaxing the child to come.

I was called to one case of antepartum hemorrhage, where I found the patient sitting supported by the midwife as described, and dead. I could hardly persuade the family that nothing could be done.

If the cord or a foot comes down I have known of an old shoe being tied to it to be sure that it did not return.

The preparation made by a Chinese family for the coming of a new baby is very

simple. In some places a pile of sifted earth is prepared; a strip of coarse blue cotton cloth a foot wide and about two feet long, and two red garters, are purchased; some bits of old cotton or silk rags are washed out, cotton and wool from old garments collected—and all is in readiness.

In the cities, and among the people of means in the country, a few pounds of a coarse brown paper, cut in convenient squares, is substituted for the sifted earth as an absorbent for the brick bed. Sometimes a piece of oiled cloth is also provided. In some families the midwife is expected to give the baby a bath, but often it is not washed at all until the third day, when it is put into a basin with eggs and nuts dyed red, and gifts of money or cloth for the midwife who presides at this function.

The cord which has been torn or burned off, after being measured to the child's feet, is coiled in a heap on the baby's abdomen and covered with powdered alum or the sifted earth and a wad of cotton, and held in place with a strip of cloth. If earth is used, tetanus sometimes follows. The cord is cut so long to insure proper action of the bladder. The baby is then rolled in the blue cloth, with its arms close to its sides that they may not grow crooked, a red garter is tied around the shoulders and another about the ankles, and its toilet is complete. It is then folded into a bundle in a little quilt to keep it warm.

Cases Seen by the Missionary Physician

We are called to cases that have been in labor from one day to two weeks. From one to ten midwives may have already been called. The patients are often septic before delivery. They seem to be able to stand the sepsis better than western women. If we deliver the woman ourselves so that we know the uterus has been emptied, we expect most of them to get well and that without fresh air, or cleanliness, or nursing, or quiet, or proper diet or douches. For some years I have saturated them as quickly as possible with calcium sulphide, given the dosimetric trinity for the fever, nuclein and sometimes Buckley's uterine tonic, and have been surprised at the good results following.

I conclude that puerperal fever must be very common, and the fact that it begins

with a chill has given the people their thought that cold is very dangerous. Nothing cold is swallowed, even the medicine is given with hot water. Not a breath of fresh air is allowed to enter the room if it can be prevented. Often even the patient's face and hands are not allowed to be washed. I can only secure some local cleanliness by ordering an antiseptic to be used in very hot water.

Some of the young Chinese who are educated are more intelligent today and engage a doctor, dispense with the midwife and do as they are directed. The number is greatly increasing and to meet this need we must train young Chinese women for this work.

In all the vast Empire of China there are but two medical schools that aim to give a course in Western medicine to the Chinese

women. One is the school in the far south, in Canton, in the Presbyterian Mission. This has been doing good work for a number of years. The second is a new school, lately organized as a union school by all the American missions in Peking. This school has not a building of its own as yet, but it has entered the first two classes, representing four different provinces.

The needless suffering inflicted upon the mothers of China by ignorance and superstition makes us long for the day when the "new woman" of China, emancipated by education and ennobled by Christian love, shall take her place in the New China, bringing life and health to the abused and afflicted motherhood and unhappy childhood of that long-suffering people.

A Method of Closing the Abdominal Wall

The "Favor Dressing" and How to Use It

By JOHN DILL ROBERTSON, B. S., M. D., Chicago, Illinois

Head of the Department of Surgery and Professor of Clinical Surgery in Bennett Medical College, Medical Department of Loyola University

LIKE all evolutionary processes, the development of the modern technic for suturing the abdominal walls, from the original *en masse* or through and through method, has been a gradual growth. It is safe to claim that the accepted method of tier suturation is not the last word on the subject. While a tremendous advance on the old method it is by no means ideal. Witness the comparative frequency of suture abscesses and the length of time required to introduce the various layers of stitches in support of this assertion.

The Embryologic Development of the Abdominal Wall

It is only necessary to refer to the embryologic development of the abdominal wall to find a strong reason against the introduction of cross-sutures in the closure of median or lateral vertical incisions. Springing from the notochord at an early period of embryonic life the lateral processes rapidly develop and curve forward and inward until about the fifth week, when they coalesce in the anterior median line.

These processes are separately nourished by a vascular supply, peculiar to themselves, and often their fusion in the median line



Fig. 1 Vascular relations in the abdominal wall

of the body is the only distinction of vascularity which exists. In the fully developed fetus the blood supply is derived from two deep epigastric arteries, the upper springing from the mammary artery of either side, and descending to anastomose with the corresponding branch which comes from the anterior branch of the internal iliac artery.

While these vessels intimately anastomose and are closely connected by numerous minute collateral branches of the corresponding half of the body there is no communication between the anastomosing systems of the two sides. Hence, an incision made through the median line of the body, the linea alba, is almost bloodless.

Why Pus Abscesses are Formed

Now, it stands to reason that the numerous minute branches of these anastomosing vessels must have a general direction across the lateral half of the ventral wall, running either obliquely upward or downward toward

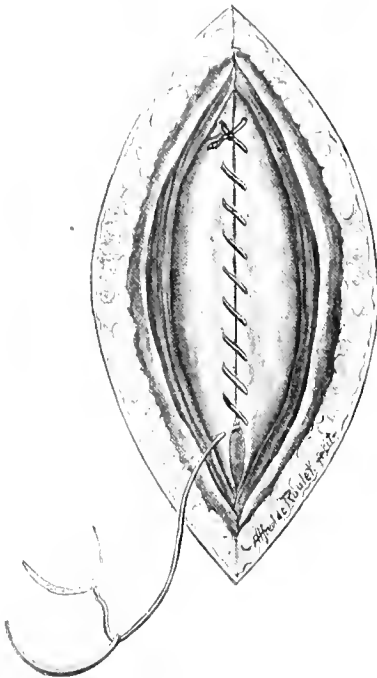


Fig. 2. Catgut applied to peritoneum

the anterior median line of the body, therefore, sutures introduced in a transverse direction across a vertical line of incision must necessarily include and obstruct numbers of these almost microscopic structures.

It is obvious that the interference with the circulation of the wall thus brought about must react deleteriously upon the tissue-cells, numbers of which become necrotic and must be removed, either by quick lym-

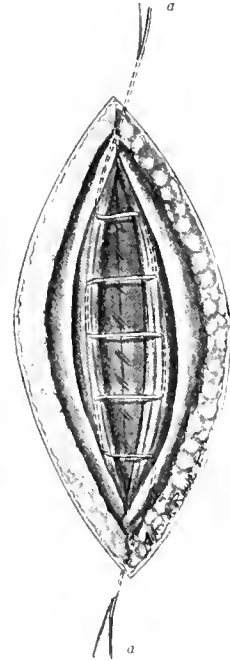


Fig. 3. Suture of the deep fascia or aponeurosis of the recti muscles

phatic absorption, or by the formation of more or less extensive pus foci. In this way the development of suture abscesses is favored; and should there be any degree of infection of the suture material used the abscess will be more readily formed.

Another Objection to Cross-Sutures

Again, an examination of the tissues comprising the abdominal wall will clearly show that nature relies mainly upon the dense aponeurotic sheaths of the muscles to maintain coaptation of the various parts. The more delicate muscular fibers and bundles are not closely held together, but may be easily separated by the finger-tips or by the handle of the scalpel.

It is not necessary, therefore, in introducing the sutures which are required to close a vertical incision, to include in their grasp the muscle-fibers contained between the deep and superficial fasciæ. If the fasciæ be carefully approximated, the inherent

contractile power of the muscle-fibers will cause them to more closely adhere to each other, and this natural muscular contractility will be hampered and more or less destroyed by any foreign body passed transversely around the bellies of the fibers. Hence, we find a second objection to the insertion of cross-sutures in the closure of the usual abdominal-wall incisions.

There is still another objection which may, and should, be advanced against the customary method of tier-suturation.

With the exception of the peritoneum, which is generally closed by the finest catgut introduced as a running suture, the closure of the deep fascia and the skin and superficial fascia is accomplished by the insertion of not less than twelve or fifteen individual sutures in the successive tiers. This involves the use of a considerable quantity of foreign material, the invasion and manipulation of an extensive area of tissue, and the consuming of an appreciable period of time.

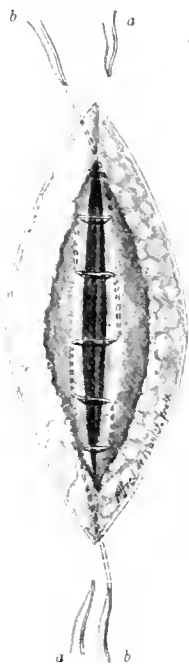


Fig. 4. Suture of the superficial fascia

Often the largest portion of the time consumed by an operation is spent in the final closure of the abdominal wall, just because of the tediousness of the final suturation. The operator must be careful above all

things not to enclose an epigastric artery in his sutures.

The method which the author has employed for a number of years, and which is herewith described, has met these objec-

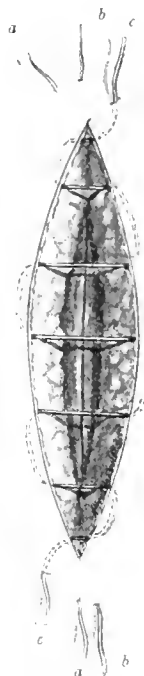


Fig. 5. Final subcuticular suturation

tions in a satisfactory and plausible manner, and the ultimate results have been all that could be desired. The name of the "favor-dressing" has been applied to this combined method of tier-suturation and wound dressing as most adequately describing the technic. It is as follows:

Technic of the Favor-Dressing

The peritoneum, which is held as usual in the grasp of a number of hemostatic forceps, is closed by a running suture of No. 1 catgut (as shown in Figure 2) which is firmly tied at each end. Then a needle, threaded with "double Mariana"—the heaviest grade of silkworm gut known—which has been boiled but once (since frequent boiling renders brittle the best of silkworm gut) is introduced through the skin close to one end of the incision. The needle traverses the tissues and is made to emerge in the deep fascia on either side of the line of incision. It is carried directly across the wound and

enters the deep fascia of the other side at a corresponding point (Fig. 3). A short buried stitch is taken in this fascia, the needle



Fig. 6. Wound closed and ready for dressing

emerging half an inch beyond on the same side of the wound, and is then carried across the wound to a corresponding point on the opposite side, where it is again buried. This process is repeated until the fascia is closely coaptated throughout the entire length of the incision, the needle then being carried through the tissues, as at the point of entrance, and caused to emerge on the skin surface near the other end of the incision. The two ends of the sutures are then grasped in either hand and gently drawn backward and forward in order to free the thread from any kink or undue hold upon the fascia.

A second suture (*b*, Fig. 4) of the same material is now introduced through the skin close to the point of introduction of the first silkworm-gut suture (*a*). It passes through the subcutaneous tissue and emerges on the upper surface of the superficial fascia of the muscle, close to the lower end of the incision. This fascia is closed in the same manner as was the deeper fascia, the thread coming out on the cutaneous surface close to the point of emergence of the first suture. When

drawn taut the fascia is firmly coaptated above the muscle fibers. The same process of gently drawing the suture backward and forward is observed. The introduction of these two sutures may be varied, if desired, by following the running method, care being taken not to apply the stitches too closely, in order to prevent binding of the suture.

Finally, a subcuticular stitch (*c*, Fig. 5) is inserted in precisely the same manner, the ends of the three sutures emerging from the skin at either end in close proximity to each other. A soft roll of sterile gauze is now laid over the line of incision lengthwise, and firmly tied to the abdominal wall by the



Fig. 7. The "favor," or Robertson dressing applied

extremities of the sutures which were used to close the incision, two of the threads encircling one side of the gauze and one the other side (Fig. 7). The superfluous gauze is then cut off at either end. In this way the wound is completely covered and there is no probability of slipping of the dressing during the movements of the patient.

It is well to note that the entire skin of the abdomen has been sterilized in the usual way with alcohol and bichloride solution, and that immediately before the incision is made the surface of the abdomen is painted with

tincture of iodine, and then wiped with a gauze saturated with alcohol. Thorough sterilization of the skin is thereby secured and the development of suture abscess is rendered absolutely impossible. It must also be noted that this method of wound-closure is not employed in infected wounds or where drainage is necessary.

The advantages which are claimed for this method of closure of the abdominal incision may be recapitulated, quite briefly, as follows:

1. The resulting scar is almost invisible—much finer than when skin clips are used.
2. There is a reduction of the number of sutures to three, whereby the danger of infection is materially lessened, as is also the time required for closure of the wound.
3. The sutures are easily removed, if they are properly introduced.
4. It is possible to secure a closer application of the dressing than in other methods, and the use of strips of adhesive plaster for this purpose is done away with.

Hyoscine and Scopolamine

Their Uses and Their Combinations

By E. ROBERT TISSOT, M. D., Chaux de Fonds, Switzerland

EDITORIAL NOTE.—This is the final paper of the series upon the solanaceous alkaloids which Dr. Tissot has written for "Clinical Medicine," and which has appeared at irregular intervals during the last year. The paper preceding this was published in the December, 1910, number.

AS its name indicates, *scopolia atropoides* (Schultes) closely resembles the belladonna plant. It is a herbaceous plant, about sixty cm. high, and grows in calcareous soil, in the shadow of beech trees, in southern Bavaria, Styria, Carinthia, Croatia, southern Russia, Sicilia and eastern Prussia.

Scopolia japonica (Maximowicz), the "roto" of the Japanese, resembles *scopolia atropoides*, of which it appears to be merely another variety. This plant is indigenous to Japan and Korea, and obtains a luxuriant growth.

Anisodus luridus (Link), or *scopolia lurida* (Dunal), is a plant of the Nepal. It grows to a height of 1 to 1.5 meters, and it resembles the belladonna plant.

The word *scopolia* is derived from the name of the botanist who discovered the plant, J. A. Scopoli, who was professor of botany in Pavia toward the middle of the eighteenth century.

Until 1880, the plant did not offer any particular medicinal interest. At this time it was examined by Langaard, who discovered, in the rhizome of *scopolia japonica* a saponin, rotoin, and scopoleine, the latter an alkaloid.

In 1889, Eyckmann succeeded in preparing a large amount of these substances. Later Schmidt and Henschke demonstrated that scopoleine is not a chemically definite substance, but that it is composed of nearly equal portions of atropine and hyoscyamine. Aside from these two alkaloids, there are found in it small quantities of hyoscine and cholin, as well as scopolin, which latter is a glucoside.

The scopolamine of Schmidt is the equivalent of the hyoscine of Ladenburg. It is an oily substance which is capable of crystallization, the crystals melting at 59° C. (138.2° F.). The hydrobromide of scopolamine forms rhombohedral crystals, which are soluble in water and have a bitter taste.

The important position which this substance has occupied during the last years in therapy obliges me to present a very complete study.

Hyoscine and Scopolamine—A Complication

The hydrobromide of hyoscine which Merck has put on the market corresponds to the formula $C_{17}H_{21}O_4N$. $HBr + 3H_2O$. This substance also contains some traces of foreign bases; but, considering these traces,

which are hardly determinable, is it worth while to call the pure alkaloid "scopolamine?" I do not think so, although I am obliged, in spite of myself, to accept the condition, and with it a further complication in terminology. The word hyoscyne having been removed from the German Pharmacopeia, we are obliged to employ the word scopolamine.

[If we understand Dr. Tissot aright, his position is very similar to that held by ourselves. While in an absolutely pure state hyoscyne and scopolamine may be chemically identical, still, as commercially found on the market, scopolamine contains traces of foreign bases, so that there is not *actual* identity between the two. We know that much inferior scopolamine was placed on the market a few years ago. Presumably the condition is better now. Dr. Tissot accepts, though he does not entirely approve of, the alleged identity of hyoscyne and scopolamine, and therefore, from this standpoint, generally uses the word "scopolamine."—Ed.]

The Scopolamine Impurities

But there are still other complications. Hesse has found in the hydrobromide of scopolamine an alkaloid which he calls atroscine, and which is the equivalent of the *optically inactive scopolamine* of E. Schmidt, of the hyoscyne of Bender, and of the crystallized scopolamine of Luboldt.

Atroscine is optically inactive. In the presence of potassium it splits into oscine and atropic acid. Scopolamine, under the influence of light, is slowly transformed into atroscine. In the dark it is stable.

These slow changes explain the differences which have been discovered in the action of scopolamine and show the necessity of only, and always, employing an alkaloid derived from a like source, which source must, of course, always be a dependable one.

It is, moreover, necessary to prepare the solution immediately before using and to add nothing else, no other alkaloid, to the same. The ready-to-use ampules of morphine and scopolamine in solution (scopomorphine) should therefore be rejected.

It is further necessary to make sure that scopolamine does not contain any apoa tropine, an alkaloid which is found in bella-

donna and sometimes in the commercial scopolamine. This alkaloid is only slightly mydriatic, but it is very poisonous and produces violent psychic excitement. This action counteracts that of scopolamine, of a certainty. According to Kessel, the presence of apoa tropine can be recognized by its reduction (being colored brown) by means of a few drops of a solution of permanganate of potassium added to the alkaloidal solution.

The Physiologic Action of Scopolamine

This is diametrically opposed to that of morphine. As a matter of fact:

Scopolamine increases, while morphine diminishes the number of pulse beats and the blood pressure.

Scopolamine dilates, while morphine contracts the pupil and the vessels.

Scopolamine accelerates and deepens, while morphine paralyzes respiration. [According to many authorities scopolamine depresses respiration.—Ed.]

Scopolamine inhibits, while morphine stimulates the secretion of perspiration.

Scopolamine stimulates while morphine arrests intestinal peristalsis.

Scopolamine is eliminated by the kidneys, while morphine is eliminated by the intestines.

Scopolamine paralyzes the motor nerves, while morphine paralyzes the sensory nerves.

This antagonism of the two remedies, when used together for anesthesia, shows the advantage which we may derive from the combination in morphine-scopolamine. In fact, the two alkaloids complete and supplement each other. They are capable of removing sensation and pain while neutralizing their respective unfavorable secondary effects.

Let us consider their advantages, first, in psychiatry; second, in surgery and especially in obstetrics; third, for producing euthanasia.

Scopolamine in Psychiatry

Scopolamine was introduced into psychiatric therapeutics by Gnauck, in 1882. The authors do not agree in regard to the dosage. Klinker and Seglas consider doses of 1-300 to 1-120 of a grain as useful. On the other hand, Willerup gives 1-60 to 1-20 grain for

weeks and months, by way of the stomach. A patient who had by mistake taken 1-3 of a grain recovered in the course of a few hours. Wuerschmidt has seen doses of 1-200 to 1-120 grain give good results at first; but a tolerance is quickly established and the dose must be increased to 1-100 or 1-80 grain, and even to 1-60, in order to obtain an effect equal to the initial action. This author did not wish to go higher, in order to avoid inopportune effects such as are sometimes observed—and these, moreover, even after small doses.

These by-effects are those of atropine, namely, delirium and visual hallucinations. They do not occur in hysteric patients, in whom a rather prolonged sleep is induced. During this sleep other patients have terrifying visual hallucinations, which are very disturbing to the mind. There is hardly a remedy which produces such diverse individual reactions. The sleep following its administration is profound, lasting from seven to eight hours, and leaving the patient with a feeling of malaise. The muscular relaxation persists from fourteen to sixteen hours.

In cases of excessive psychomotor agitation, scopolamine may save life, because it prevents the exhaustion due to an extreme waste of force. Its action is excellent in violent hysteria. Anemia and feebleness (decrepitude) do not constitute a contraindication. Subcutaneous injection is preferable to the oral administration. Wuerschmidt advises giving 1-600 to 1-300 grain of scopolamine together with 1-6 to 1-3 grain of the morphine hydrochloride. These high doses do not exert any harmful effect, on account of the antagonism between the two remedies which we have described.

Value of Scopolamine in Delirium

In delirium and profound mental depression (which latter may produce a very serious excitement, the same as may occur in melancholia) there is no better remedy than scopolamine and morphine combined. Morphine alone is insufficient because dangerous doses are required to obtain the proper effect. It is best to give 1-6 grain of morphine hydrochloride and 1-120 grain of scopolamine. Of the latter, the hydrobromide should be

used because it is said to be purer than the hydrochloride.

The action of scopolamine appears terrifying. Its effects are abrupt, sudden. After five or ten minutes the patient goes to sleep and becomes extraordinarily pale, but this pallor is without danger. It is well to speak of this pallor beforehand to the family, and to explain that it is not to be feared. It is due to a vascular contraction, together with an elevation of the blood pressure. The speech becomes embarrassed and the walk uncertain. Scopolamine acts first of all upon the motor centers.

No case is known where scopolamine has caused death. The remedy is inoffensive, even in patients with cardiac lesions or with arteriosclerosis.

Scopolamine fetters the patient chemically. It possesses this advantage over the mechanical restraint of the straitjacket, that it paralyzes the patient, who therefore does not resist his fetters, and does not attempt to break them in his frenzy.

In order to maintain the paralyzing and quieting effect, three or four hours after the subcutaneous injection we give from 10 to 16 grains of veronal. The paralyzing effect of scopolamine has been made use of in the delirium of infectious diseases, and in paralysis agitans.

Dosimetrists do not admit these two indications. It is not proper to attack a single symptom, if it is possible to attack the cause of the disease itself, and this can be done by means of the dosimetric trinity (strychnine arsenate, aconitine and digitalin), and by the use of a combination of quinine sulphate, strychnine arsenate and caffeine.

We may note, in passing, that scopolamine has been used with great success for opposing the painful sequels of zona, which are so distressing, especially in old people.

The Use of Scopolamine in Surgery and Obstetrics

Korff, recalling the antagonism between morphine and scopolamine, and especially the fact that these two alkaloids complement each other admirably, conceived the idea of introducing the narcosis produced by the two remedies into surgery. This narcosis is employed preparatory to that induced by

ether or chloroform. After the administration of morphine-scopolamine the amount of ether or chloroform necessary to produce absolute narcosis becomes much less. Moreover, this combined narcosis is more humane, because in its employment the patient does not suffer the anxiety or the sensation of choking; there is no vomiting, no malaise, no collapse, no tracheal râles. All these advantages have gained many supporters for the new method.

In obstetrics, this was more difficult, because only few physicians are present from the beginning to the end of an accouchement and therefore do not hear the groans and cries of parturient women. These physicians, moreover, console themselves with the idea that the physiological pain should be endured—"the sorrow of child-bearing," according to the Scriptures. But, since biblical times women have become more nervous, and it has become necessary, willy nilly, to find the remedy which will counteract the exaggerated manifestations of this excessive nervousness. Therefore, the narcosis by scopolamine and morphine, the *daemmerschlaf* of the Germans (that is, the "drowsy-sleep"), is gaining more partisans than ever among obstetricians.

Surgery and Obstetrics

On the evening before the operation, the patient should take 8 grains of veronal in one dose. The next day, one and one-half hours before the operation, a subcutaneous injection is to be given containing 1-200 grain of scopolamine, and 1-6 grain of morphine. [We prefer 1-200 grain hyoscine, with $\frac{1}{8}$ grain morphine; in severe cases, double this dose.—ED.] For prolonged operations, this dose should be repeated half an hour before beginning operation, that is, one hour after the first dose. By this method the doses of ether or chloroform required will be very small. The respiratory organs are then but little affected, and the percentage of post-operative pneumonia falls from 2.5 percent to 0.7 percent. The heart and kidneys have never been injured by this method.

It is not best to mix a scopolamine solution with a morphine solution. Prepare it freshly when it is to be employed.

As soon as the uterine contractions are well established, 1-200 grain of scopolamine and 1-6 grain of morphine should be injected under the skin, above the breast. One hour later the dose is repeated. These two injections are sufficient for a normal confinement. If this is prolonged, a third injection is permissible, three hours later. It is even proper to inject half the dose every four or five hours. A compensated cardiac lesion does not contraindicate the employment of scopolamine. (Max Cremer, *Medizinische Klinik*, 1910, page 1094). The room in which the parturient patient lies should be half-dark, but it is useless to make her wear smoked glasses and to stop up her ears (with cotton) because then she might think that it is desired to hide something from her, and this idea would disquiet her and disturb her confidence.

When this method is followed failures are very infrequent and the infantile mortality is less than it is in normal confinements without such narcosis.

This method constitutes the semi-narcosis, or the scopolamine-morphine *daemmerschlaf*, which appears destined to play a very great role in obstetrics.

Sometimes the narcosis appears to be far from perfect. The woman cries out and groans as though she had not taken any narcotic. She reproaches the physician and asserts that she feels all the pains. Nevertheless, on awakening, she does not remember anything. Sometimes hallucinations occur. There is thirst. It has also been asserted that this narcosis prolongs labor, but this has never been proved. After confinement, the patient feels perfectly well.

The family should be told that the cries which the woman may utter do not mean at all that she feels the pain, and also that her hallucinations will not result in any harm. The patient should remain quietly in bed and not leave it under any condition. Finally, the midwife must not leave the room. For thirst, a few spoonfuls of tea may be given, or the woman may wash the mouth and throat with fresh water.

The cases in which this narcosis has been employed are already very numerous. In 1908, Kroenig published 1500 cases. Clif-

ford reviewed 1100 cases; Beruti, 600; Cremer, 217. No accidents have been observed. [A few alleged accidents have been observed, both in Europe and America, but these have been traced, in almost every instance, to errors of technic or excessive dosage.—ED.]

The Employment of Morphine-Scopolamine in Euthanasia

There are patients in whom the terminal agony and the râles are prolonged beyond endurance. Who does not remember the loud death rattle which may be heard far away from the unhappy victims of cerebral hemorrhage, of fracture of the skull, of meningitis, or from patients who are afflicted with an incurable malady, such as cirrhosis of the liver, cancer or bone tuberculosis? In order to relieve the suffering of these unhappy patients, nothing else is of such value as scopolamine and morphine. I advise my confrères to adopt a *modus faciendi* which has the immense advantage of affording peace to the patient, to his surroundings, and to the physician. The distress of the family is thus eased. The dose to be injected should be 1-600 to 1-300 grain of scopolamine and 1-6 to 1-3 grain of morphine.

The Combination of Morphine, Dionin and Scopolamine

It has been suggested by Schlesinger (*Zeitschrift f. ärztliche Fortbildung*; 1909, p. 261) to use this combination for the relief of the often atrocious pain due to neoplasms, of cancer of the vertebræ, obstinate neuralgia. For this purpose, half a cubic centimeter of the following solution is injected:

Scopolamine hydrobromide.	gr. 1-25
Morphine hydrochloride.	grs. 3
Dionin	grs. 5
Distilled water	grs. 160

It is sometimes necessary to give as much as two full syringefuls of this solution a day. The analgesic action is very prompt, and lasts several hours, sometimes all day. The sensorium remains free. It is possible to talk with the patients, who say that they no longer feel pain. This solution may be administered for long periods without harm.

Hyoscyamine, Atropidine, Duboisine, Daturine

The henbane (*hyoscyamus niger*) of the family of Solanaceæ contains atropine, scopolamine, and atropidine or hyoscyamine (also known as duboisine or daturine).

The word duboisine comes from the fact hyoscyamine is found in the duboisia myoporoides, an Australian and New Caledonian solanaceous plant. The word daturine is derived from the Latin name of thorn-apple (*datura stramonium*), also a solanaceous plant, which contains an alkaloid called daturine, which, however, is nothing else but hyoscyamine.

Hyoscyamine, we have said, is more narcotic and less toxic than atropine. For this reason, the dosimetrists use it in preference to the latter, especially in such combinations as strychnine, morphine, hyoscyamine and digitalin; and also strychnine, hyoscyamine and digitalin, combinations which are known under the name of "diuretic" and "antispasmodic" granules. These combinations are extremely useful in relieving spasms, intestinal colic, also hepatic and nephritic colic. They are absolutely innocuous and do not depress the patient as much as does morphine used alone. Of these combinations, one granule may be given every hour until effect. [The antispasmodic combination preferred in this country consists of strychnine arsenate, hyoscyamine and glonoin.—ED.]



Medical Practice in Syria

Random Records of An American Dermatologist

By **WALTER BOOTH ADAMS, M. D., Beirut, Syria**

Professor of Materia Medica in the Syrian Protestant College,
Medical Department, Beirut, Syria

EDDYOPATHY, homeopathy, osteopathy, and kindred delusions do not plague us here in the Levant; and yet we have our own troubles, and with us it is "nilopathy."

Now, I am sure that the old woman, the grandmother, the neighbor who "knows a heap about yarbs" has upset the therapeutics of many a case in charge of many members of the "family" in America; and so it is here, and even more so, where superstition has so many centuries held sway in religion and medicine, and where scientific medicine has been taught for only a little over forty years.

When Baby Has "Rubby"

One has a case of infantile eczema and it is progressing finely; the old grandmother hears that her grandchild has "rubby," and she hastens to undo all you have done your best to accomplish in the way of a cure. It is nearly impossible to convince her that if the child gets well short of a year that it will not die of some internal disease. The same estimable old dowager will smile in a most superior way when you promise a cure of the terribly dreaded "jurb," scabies, in a week; but when the cure is accomplished she thinks you are a wizard and becomes your strong friend and ally. She is not a fool; she has many ideas that have come down the ages, some of great value; but it is most difficult for her and her friends to realize that there are new lines of treatment that have superseded some of the old practices.

A former colleague in our faculty, who had to return to America for family reasons, told me that he used to think the Syrians were very difficult to practise medicine among; but since he had been back home he wished to say that Americans were far more cranky when they were sick. The general public at home, with its high-school physiology and newspaper therapeutics,

thinks that it has at command all the range of medical science; and hence the hypercritical attitude which we do not have to endure in the same form in this land.

One of our blessings is that the people have a firm faith in drugs and medication, so much so that if you do not hold out a favorable prognosis they often think that you do not know the proper remedies, and hence the "bring another doctor" goes on while life lasts. It is a blessed thing that they have this faith, for it is a great help in the management of our cases.

But perhaps before medicine I ought to mention the great use of three other agencies: cautery and an issue, venesection and leeches. They are ancient remedies, and are held in highest esteem for a wonderfully wide range of maladies.

The Active Principles Are Popular

The people take kindly enough to Brother Abbott's active principles; they quickly see the point of precision and the thing itself, but here, a medicine to be regarded as at all efficacious must be both colored and have a distinct taste, bitter by preference. You can now understand how an American homeopath starved out here, and why we had to take up a collection to get him to Egypt, where he had an offer of employment.

As a general rule, we find that we have to give rather larger doses than the materia medicas prescribe for the folks at home. Climate and manner of living, as well as racial peculiarities, doubtless are factors in this matter. On the whole, we have to deal with a temperate and abstemious people, though many do drink, and the drink evil is increasing, and, I am sorry to say, at a greater extent among the Moslems than most people realize. When I find a Moslem who drinks I try to shame him and remind him of the precepts in his book.

I am sure that the members of the "family" will be interested in the matter of fees, for I am often asked about them when I am in the homeland on a furlough. The ordinary office fee in Beirut is half a mejidy, forty-one cents. That coin is worth eighty-two cents, and that is the usual visit fee. Consultation fee is twenty francs, about four dollars of your money.

The professors of our Syrian Protestant College usually charge double these fees, a mejidy for the office and two for a visit, and where special examinations are to be made, two mejidies are charged at the office. The French faculty adhere to these fees and the general practitioner can not say that we cut him out. We are not here for that purpose, but to train up an educated body of medical men for this and the adjacent lands of Asia Minor and Egypt. The Syrian will bargain for the lowest price, but once he has made his bargain he sticks to it. There

are many poor and one has an abundant opportunity to help the poor, the halt and the blind and the wretched.

There are many phases to our work here that perhaps would interest my fellow readers of *CLINICAL MEDICINE*, but I must bear in mind Matthew Arnold's three points: "clear, plain, short," and I fear I have been none of the three. I shall save up something specific for next time, which reminds me that we are now in the midst of great excitement over the first use of Ehrlich's "606." I may give you my experiences if you wish them. I am a lonesome dermatologist, having no fellow between Alexandria and Constantinople.

[Of course we want the Doctor's experience. I am sure that every reader of *CLINICAL MEDICINE* will join with us in the hope that the promised story may be ready for us "soon."—ED.]

What One Practician Has Accomplished in Mexico

With a Note as to "How Physicians Get Left"

By ROBERT GRAY, M. D., Pichucalco, Chiapas, Mexico

SOMEbody in high repute has affirmed, and several thousand doctors have confessed, that the medical fraternity is gulled with a facility requiring the least plausible inducement of any class of humanity, high or low. Hundreds of doctors write me, at this late day of progressive light, to seek information about some grand plantation-stock investment in Mexico, after I have tried repeatedly to advise the profession, through channels that should have reached many of them, that money thus parted with is almost sure to be lost.

And now a few words about alkaloidal medication and the bitter opposition with which it is meeting at the hands of those who still adhere to the galenic remedies.

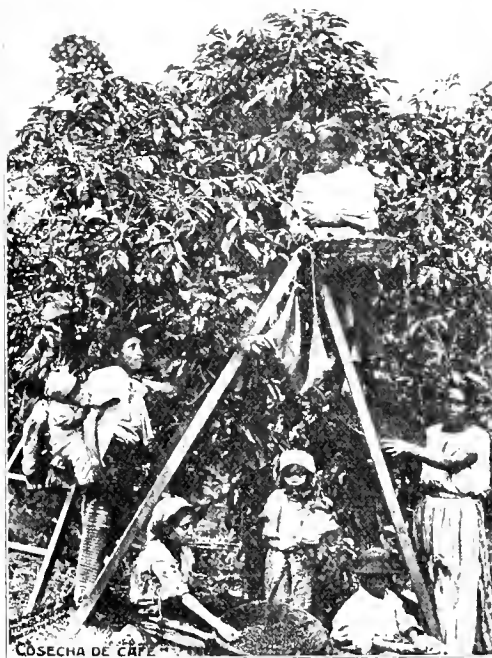
The worship of Galen, in so far as reverence for his antiquated bequest to the pro-

fession does not inhibit progress, may be all right and proper; but to make it the law and rule of practice at this late day of dazzling intelligence would be, and is, as stupidly absurd as it would be to stick to the puny craft of Columbus as the medium of navigation, simply because his little vessels served to discover America.

Galen gave the world the best there was in existence two thousand years ago, and his work has served mankind through the long vicissitudes of many troubled centuries, simply because there was never enough of genius endowed with the talent to achieve any practical betterment until late in the past century. Then this beautiful and laudable bequest, active-principle therapy, dosimetry, was vituperated and scorned and denied practical trial by the leaders of American medical thought, the power that

should have extended it a generous welcome and given it the fullest possible tests.

An "improved galenic medication" is what those blind leaders of the ignorant have been, and are, fighting so tenaciously. We have not abandoned Galen, but indomitably adhere to him, replacing his crude substances with clean, pure and concentrated medications, in a form such that they will never deteriorate, of uniform strength and accurate dosage. *These are the active principles of Galenic substances.*



Harvesting Coffee in Guatemala

There are American rubber plantations where I now write, and within eight leagues nearly a million trees on each of two of them, and a smaller number on others, with several Mexican plantations in the same belt. The American owners have discarded galenic medication because of the high rate of mortality and ruinous loss of labor due to sickness suffered on their plantations, and these men have secured my services, almost by force, and at high prices, since I did not want the practice. And the "improved

galenics" have given such incredible satisfaction that the contract prices paid me have been increased twenty-five percent at the volition of the American owners, who live in the United States.

On the big place from which I now write forty died in three months, three years ago; and from two to five have died every month for years past, while half the men are usually off duty. During the nine months during which the medication I have brought has been employed but one man has died, and he was dying in the night when I first saw him. Now there are rarely more than from one to three a day not at work—sometimes none; and the number of men has been doubled this year, sixty of them coming from the cold belt of Mexico.

I am the only person who has not had fever, the American manager and all his family having been stricken. It would be impossible for current galenic medication to get employment under any state of circumstances on any of these rubber plantations, where the men get dripping wet half the days in the year, the rainfall being a hundred and fifty inches, with a torrid sun when it is not raining, this condition creating malaria so fast that imagination can almost slice it with a knife.

There is a native graduate of the University of Pennsylvania ten leagues from where I write, who has been forced to adopt the medication I employ, and his success closely approximates mine. He and I together handled more than a thousand cases of black or German measles in 1910, with no death, while our galenic brethren lost scores and scores on adjacent plantations.

The same fate meted out here by American capitalists awaits galenic medication at an early date wherever labor is employed; and the success of the operations it develops depends on the high grade of health thus secured. This is as inevitable as the law of gravitation or that of the solar system.

I did not and do not want this employment, but was sought and importuned to take it, for the reasons stated. And I am now striving to make the results tell in favor of true medication in my native land.

Alkaloidal Practice in Guatemala

Some Interesting Experiences of a Missionary Physician

By CARLOS F. SECORD, M. D., Chichicastenango, Quiché, Guatemala, C. A.

EDITORIAL NOTE.—Like many of the other physicians who are contributing to this *Beyond the Borders* number, Dr. Secord has to treat all kinds of cases under all sorts of conditions. Considering the circumstances, he secures remarkable results, and the story of some of his experiences, as given in this article, is of exceptional interest.

THE physician who practises medicine in the lands to the south of the United States will continually encounter disease manifestations so new to him that he will find great difficulty in treating them unless he has studied the basic principles of the healing art, and has, at the same time, learned the physiological effect of the various medicinal agents which modern science has given the world.

The writer, with his wife and five adopted children, lives among the Quiché Indians, in the highlands of Guatemala, at an altitude of some 6500 feet above the sea level, but diseases of all kinds are daily presented to him, among which are all those of the temperate and tropical zones, with all their multiplicity of complications.

Malaria and its Treatment

As thousands of the Indians go to the plantation country, south of us, many of them return with parasitic diseases of the blood, chief among them being malaria, with all its dreadful manifestations of tropical countries.

It is curious how some cases of malarial infection will not recover under ordinary treatment—and the writer uses berberine, glonoïn, aconitine, and the various quinine salts, for this disease. It is an error, I believe, to use the abominable sulphate of quinine in this disease—or indeed in any other—and it should be obliterated from the minds of physicians completely, as this sulphate is directly responsible for various diseases almost as bad as the original one for which it is prescribed.

As the use of rum is alarmingly on the increase in this republic, among all classes of people, the Indians suffer greatly from

this vice, and many seek my services to rid them of this habit. I have perfected a treatment which gives splendid results, and have definitely cured hundreds.

For the tobacco-habit, I believe, the combination of thiosinamin and cactin, used hypodermically, is a specific, for it has given good results in my hands.

Cactin seems to increase the beneficial effect of hypodermic medication; and it is, in fact, a grand therapeutic agent.

In diseases of the stomach and intestines, the lactic-acid-bacillus tablets give astonishing results, and some of the most intractable cases have been cured by their aid in my practice.

Hypodermic Anesthesia

The use of the hyoscine, morphine and cactin anesthetic tablet is a routine in all surgical cases in this station, and many times not a drop of ether or chloroform is administered. This medicine has been put to the test here and has not been found wanting.

A few weeks ago, I was called to see a young Indian boy who had been stabbed through the stomach and lung. The greater part of these organs, as a consequence, extruded from his anatomy and were covered with dirt. Assisted by Dr. J. D. Stickell, an American dentist who was here at that time, I operated on this lad at 10 o'clock at night, by the uncertain light of a kerosene lamp—but also, I will add, with the decidedly certain help of the hyoscine-morphine combination. Two of these tablets were injected at once, and a third one within half an hour. The result was excellent. We surely had a "fine" time mending this case, as the chap was full of rum and a drink made of sugar-

cane and wheat bran, partly fermented, but which had perfected its fermentation inside of his anatomy. After more than a half hour of hard work, the patient was patched

and even extracted the bullet. She made an uneventful recovery.

A few days ago, I removed a large dermoid from between the eyes of a young man, under local anesthetic anesthesia. This was a most pleasing operation because of the complete absence of pain, with but little bleeding.

The Treatment of Typhoid Fever

In typhoid fever I use the sulphocarbolates with thymol, and recently successfully treated the Governor of this State with this agent as the dominant treatment, adding other indicated remedies, besides ordering baths of magnesium sulphate. His recovery was speedy, and everybody was pleased.

Many cases of hookworm-disease have come to my attention, but they are easily cured with Gram (15-grain) doses of thymol, often repeated, with a laxative saline afterward.

Many, many obscure diseases can be traced to intestinal parasites, if the physician will but study them a little, and I have cured numbers of "disease-names" by the free use of indicated worm remedies. Even



A group of Guatemala Indians

up in good shape, and while putting the finishing touches to the lung, he began to grow conscious.

The next day the fellow walked out in the cold, and a complication of pneumonia made the case more interesting. This, however, was readily cured by the free use of calx iodata and calcium sulphide, with the deferrescent compound and heroin. His recovery was rapid and uneventful, and he went home happy after a few weeks. However, as in the days of the Great Master, he forgot to thank us, nor has he ever done so. Many are cured by us of dangerous diseases, but only a very few are grateful.

I will report one case in which the hyoscine, morphine and cactin combination failed to work, however. A woman was almost completely cut to pieces by a machete, having two deep wounds in the head, two in the right shoulder, one in the right side, and a bullet lodged in the abdomen, some two inches below the umbilicus. She was seen by me several days after receiving the wounds, and had been spitting pus from the mouth. Three hyoscine-morphine-cactin tablets were injected at intervals, and I waited for some effect, but this was not forthcoming. Therefore I operated while she was in full possession of all her faculties,



Spinning wool. Most of the sheep raised are black ones

diseases of the hair have been cured by dosing the intestinal tract.

One of the most ingenious devices, and which has many uses, is the invention of Dr. Sourwine of Brazil, Indiana. This consists of long tubes, of different sizes, with rectal and vaginal retention plugs. It can be

used for stomach lavage, as well as for colon irrigation, and has been worth its weight in gold in this mission station.

In smallpox the free use of calcium sulphide and pilocarpine will cure quickly and surely, without trouble, and without the complications so often met with.

A Doctor's Life in Spanish Honduras

By JOHN ABBOTT, M. D., Ruatan, Spanish Honduras, C. A.

EDITORIAL NOTE.—Dr. Abbott is an old friend of the readers of "Clinical Medicine," and no stranger to alkaloidal medication, which has many friends in the tropics.

WHILE not much of a letter writer, I will begin by saying that, as THE AMERICAN JOURNAL OF CLINICAL MEDICINE has done so very much for me, I will try, even though it be in a rambling sort of way, to tell your readers of one doctor's life in the Spanish tropics.

My Environment

First, then, as to my environment. Imagine yourself, if you can, living on an island twenty-seven miles long and averaging in width three miles, containing a mixed population of whites, negroes, and Indians, numbering probably three thousand, the Spanish, English and a few Americans constituting the white contingent, besides the native Indians, the bulk of these—98 percent—living along the seashore.

Through the middle of the island, from end to end, with only two small breaks, is a range of hills, averaging some six hundred feet in height. The shore on all sides of the island is lined with coconut groves, and is protected by reefs on which the sea is constantly breaking, and to the sound of which one goes to sleep at night while he is aroused by it in the morning. These reefs extend from a few yards to a full mile from the shore. On the south side of the island there are several good harbors capable of

sheltering various-sized vessels. Coxin's Hole, fifteen miles from here, and the port of entry for the island, has a harbor capable of sheltering the largest-sized fruit ships that call there for coconuts, of which the island produces from three and a half to four millions yearly, these being exported to the United States.

Oak Ridge, where the writer lives, is situated nine miles from the east end of the island, and is the chief center of the boat-building industry for the neighboring islands, and in fact, for these whole north coast of



Loading bananas on a Honduran river.

Honduras. The harbor is fine, though small. The population here and in the surrounding districts numbers between nine hundred and a thousand persons. There is a nice church building, likewise a school-



A group of young people. Dr. Abbott's two daughters in right-hand corner; also his nephew and two nieces

house, both being very well attended. And, yet, owing to the formation of the land, for a distance of twelve miles east and west there is not a road suitable for riding horseback, much less for the use of a buggy or an automobile.

How I Make My Calls

In this district there are a few trails crossing the island; yet it is far safer to walk than to ride a horse over them. I have often smiled, while reading the glowing accounts of the quick runs made in automobile, cozy cab, buggy, or on horseback, as described by brother physicians in the United States, over what the same would think and how far different they would find things if called upon, as I frequently am, to visit a patient some eight, ten miles or more distant, on a dark, rainy and stormy night, in a canoe (or dory as it is called here), measuring anywhere from twelve to eighteen feet in length, two to three feet in width and twenty to thirty inches in depth, trusting themselves to the almost always turbulent Caribbean Sea.

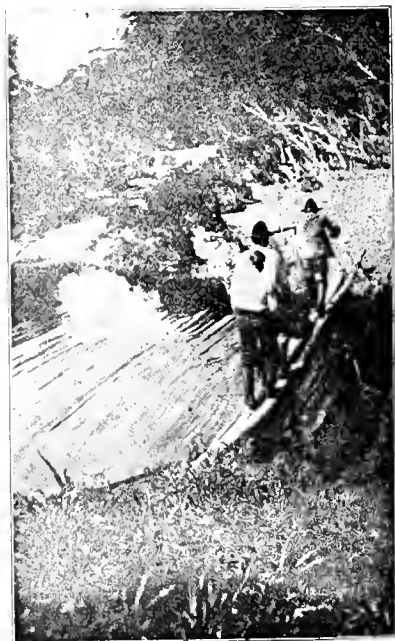
Advantages of Active-Principle Remedies

Yet, these dories and boats are our only means for traveling from place to place, and this being the case, you can easily imagine how much more convenient it is to carry in one's pocket a case filled with the active-

principle granules and a few accessories than it would be to have to lug about the bulky galenicals sufficient in quantity to fill a barrel and then not be equal to my good pocket case.

There is absolutely no question here as to dispensing or prescribing, inasmuch as

the nearest drugstore is on the mainland, at least fifty miles distant, so that often it takes as much as a week to get there and back. Since May, 1905, I have been employing in my practice the alkaloidal remedies; and the more I use them, the better I like them, because they have stood by me in many a



A bridge across a river on the mainland

stubborn fight with death and enabled me to come out on top—when I *know* that the old-fashioned galenical remedies would have surely failed me and left me in the lurch.

time. Just now I will only say that the people here prefer to take the "little pills," as they call them, rather than the nasty-tasting galenicals; this being especially true of the Carib Indians, of whom there is a settlement on the north side of the island, within three miles from my home. But many more Indians come to me from their settlements on the mainland for the same reason, as proven by one of them, who remarked one day in my office, in his broken English: "Yes, sah, dem little pills knock de debbil outen de trubble for a night, quick's dat; much more better as rum"—which was a great concession on his part, for they are a people who are very fond of that ardent drink.



View of part of a Honduran harbor

I cannot stop now to specify instances in which the active principles have enabled me to win out, but intend to do so at some future

Enclosed you will find a few photos. They are very poor. Yet you may be able to make use of some. They are all I have on hand.

Reflections from Alaska

From a Doctor Who Has Heard the Call of the North

By HENRY C. DE VIGHNE, M. D., Douglas, Alaska

ALASKA 'means "The Great Country;" and it is doubtful whether any part of our Uncle Samuel's domain is more appropriately named—just how great this disconnected Territory really is, can be appreciated only by those who gain their information at first hand. But to be etymologically complete, the name should have a suffix meaning "misunderstood," while for political usage at Washington, the word "obstinately" should be added.

If one were to try Prof. Muensterberg's theory of the association of ideas on any large number of educated Americans, it is safe to say that fully ninety percent of them would instantly respond, to the word "Alaska," with "ice," "glaciers," or something equally suggestive of superlative cold and vast desolateness. Yet it is a fact that Alaska contains an area as large as all of

the New England states combined, in which the intense cold of Boston or Chicago is seldom or never experienced.

Much of this misinformation, I suppose, is due to that peculiar human trait that urges one to exploit his hardihood. It has been conceded that Alaska has a season corresponding somewhat closely to the accepted definition of summer, but unfortunately it is of less general interest than our winters.

An Arctic "Authority"

Last week we had our first snow, about eighteen inches of it, and the annual crop of "Alaska" pictures began to sprout. I was interested in a watery-eyed stranger who looked as if he might congeal at about thirty degrees by the Fahrenheit scale. He had a photographer in tow, and was search-

ing for a suitable background to show off the immense fur hood and robe in which he was completely swaddled up. The temperature was then about 40, but the picture doubtless will make a hit back home and add one more star to the constellation of arctic authorities.

I suspect that something along that line in the way of furs, snow, dog-teams, and perhaps the aurora borealis, is expected as local coloring for this modest dissertation of mine; and if one were to enlarge on the harrowing conditions under which it might have been written—bedside of destitute patient, seal-oil lamp, howling blizzard, and all that, the picture would easily be recognized as typically Alaskan. However, a wholesome early parental training and the fact that I have personal acquaintances among your subscribers forces me to admit that I have no destitute patients, that I make most of my calls on a bicycle, and am at this moment comfortably balanced in my office-chair with feet on radiator and a beautifully colored meerschaum resting peacefully on the bosom of my "boiled shirt." I will add that tonight, to wit, the 21st day of December, the above-mentioned aurora is not in evidence, while the gently drizzling rain is ruining our prospects of a "white" Christmas.

The "Call" of Alaska

It seems to be an occasion for surprise, not to say suspicion, with the profession at large, why any one accustomed to decent life conditions should deliberately choose a location so remote from "civilization" as Alaska in which to practise medicine; or, having made such choice, tentatively, how he could possibly defend his choice, in the absence of shady antecedents, incompetency, or the encouraging support of a missionary board. But other inducements than the good, old reliable "call of suffering humanity" have lured many men to auspicious locations, and other reasons than want of skill have circumscribed their sphere of activity; and there is a charm about Alaska that frequently becomes a positive affection on intimate acquaintance, while in my own case, I have been unable to discover anything on my postgraduate excursions or in current

medical literature that has tended to dispel this glamor.

As the actual treatment of the sick is largely a matter of personal preference for any of the various measures at the command of every physician, and as you can scarcely expect an article of scientific interest from one of but ordinary ability and limited experience, perhaps a brief résumé of the development of a moderately successful practice may stiffen the spine of some disheartened brother and indicate that the spirit of contentment is not subject to geographical limits. By success, I refer to the common garden variety rather than to the hair-splitting postulates of the transcendentalist.

Some Personal History

I found it necessary to borrow the \$5.00 matriculation fee which was deposited about four months before entering college; and four years later, or, to be exact, on June 10, 1904, graduation left me with a working capital of less than \$50.00, besides an indebtedness of \$350.00. I had intended locating in Oregon, but as my funds were reduced to less than \$20.00 upon reaching Portland, while the State Board would not meet until the coming January, the future was of less urgent importance than was the very immediate present.

So, the seductive advertisement of a medical fakir in need of a youngster with a reputable diploma was studied daily with a steadily lessening sense of its impropriety the while I was tramping the streets in search of something to do. Finally, at what surely was the psychological moment, I convinced the superintendent of a large hospital that I could wash dishes, and was given a chance at it. However, the cooks were not as easily deceived as the good-natured superintendent, and so I was called to the office the next morning for dismissal. My disappointment must have struck the superintendent as unusual, for she quizzed me with such tact and sympathy that I was forced to confess my training along other lines than scullery.

That was the day on which the Goddess of Fortune first noticed me, specifically. I was sent to the wards as a sort of extra interne, introduced as a special protégé of

the superintendent, and given every opportunity for observation and study.

One Sunday morning, about three months later, word reached me of a town in Alaska that had no doctor. My wildest dreams had never pictured this anomaly, and as I had no salary at the hospital, my cash had dwindled to less than one dollar of the coin of the realm. Even the prospect of an unopposed practice at the North Pole would have had its attractions.

All Aboard for the North!

Consultation with my Good Samaritan, the Superintendent, who had a friend who knew a man whose brother had been in Alaska, gave strength to my eagerness, and when she actually insisted on advancing my transportation, the thing was settled. We hurriedly visited the basement, and from a box of old discarded instruments selected a few dozen of the most useful ones, she bombarding me all the while with a rapid fire of advice, both motherly and professional, which I have found to be of equally priceless value.

The next morning I was in Seattle, only to find, however, that there would be no boat sailing to Alaska for four long days. As we had planned only on one day, the delay cost me the difference between a first-class and a steerage passage. Few imaginations can do justice to seasickness in the steerage. I will only state that after the third day I was able to retain a little Scotch-and-soda.

It was dark and raining when eventually I reached my destination; my total worldly assets amounted to a trunk, a box, a suitcase, and thirty-five cents in real money; and within fifteen minutes after landing I learned the cheering fact that another doctor had beaten me to it by a week. The following day I made a canvass of the town, interviewed all the men of importance, tabulated their advice as to whether I should remain, and the result convinced me that my competitor would be excellent competition.

I Fit Up An Office

So the next morning began the realization of a long and ardent anticipation—the fitting up of my first doctor's office. The rent was

three dollars per month, which, judged from the exterior appearances, was extortionate; but looked at from the inside, it contained two rooms of about ten by twelve each, an old stove, a cot, a broken table, and a few other things not especially to be mentioned. Some credit at the store, a little familiarity with tools, and borrowed bedding from the hotel enabled me to sleep in my "office" the third night after my arrival. On the following day my most fervent hope was realized—I had a patient; and it is a great pleasure to reflect that she and her very large family are still loyal.

My office equipment consisted of a desk made from a piano box, two stools of equally humble ancestry, a couple of granite trays, table, books, instruments and a medicine case. My office hours were from 7 a. m. to 6 p. m., one intervening hour being devoted to dinner at the hotel.

At the end of the first month I had made and collected almost \$100.00, was visiting the dining room three times daily, my office was fairly presentable, and I myself was supremely happy. Four months later my cash practice amounted to \$150.00 per month, averaging from the beginning. The shack was then discarded for a comfortable five-room house, and a letter was dispatched to a certain young lady, who saw fit to answer it in person.

My Town and "Clientele"

After the wedding and house-furnishing all my professional efforts were directed to preparation for a larger field by giving the closest study and attention to each individual patient, collecting the maximum fee for the same, and sinking it. The town contained about 500 inhabitants, more than half of whom were Indians. There were several other small villages adjacent or at least within traveling distance which had no physician, each of from one to three hundred natives, giving a total of perhaps 400 whites and 2500 Indians to draw upon.

I was sincerely interested in the natives and found it no disagreeable task to teach them the value of my services. That it was appreciated is shown by the distance they travel to consult me now, with excellent physicians much nearer home.

At that time there were no restrictions on the practice of medicine in Alaska. The field was free to all who chose to enter it; in fact, the holder of a diploma was by many looked upon as being either immature or slightly effete. My competitor was of that belief; he and his friends backed his age, experience and jovial personality against my diploma and book-learning. We fought bitterly, and not by any means fairly, with honors about equal, until a beneficent Congress came to my assistance with a medical law that sent him on his way. In reviewing the first two and a half years of my practice, I can credit myself with an average monthly income of \$218.00, one postgraduate course, and about a million dollars' worth of experience.

Upon removing to my present location, I found it occupied by three other physicians, with an equal number near enough to be in active competition. I secured the rooms lately vacated by a very inferior man, so had practically no nucleus upon which to build. But I had a little money, some ability, and a plan, or rather a series of plans, difficult to describe but perfectly understood and faithfully persued.

My "Four Resolutions"

Four resolutions were kept to the letter: Never to be caught loafing; never to "talk shop" in public or in public places, or to discuss a patient except in regular consultation; never to interfere with conception, for pay; and never to drink, smoke or swear in public. The last-named is the only one I have broken. My mornings were devoted to making acquaintances, the afternoons and evenings to my office. I made a list of all the people of importance and memorized it. This enabled me always to address them correctly, and gave the impression of a perfect memory. They were given to understand that I had come to stay, that I was in no particular hurry for business, that I expected little the first year, and that I was not after those who regularly tried out every new physician who came along.

Only two of the other six physicians were on speaking terms, four of them were untiring boasters, and all of them publicly criticized the others—to put it generously.

And I must say that all but two of them were either antiquated, bigoted, lazy or vulgar. Much of their time was expended in maneuvering for the ear of some friend of a rival's patient, and most of their energy was devoted to the anvil.

As for myself, I secured and kept the neutrality of them all simply by allowing them to do the talking, while I was fitting up an office that inspired the few patients venturing a call with the belief that I was prepared to give them anything they required. I was and did, to the end that within a year I was the only physician in the town. And when each of my rivals retired, they recommended me to their clientele; which proves, if anything, that almost anyone will lose gracefully if the winner is considerate.

I was able to hold the town alone for almost two years, during which time a most interesting galaxy of medical derelicts drifted across the horizon—hopheads, boozers, cranks, mountebanks, and just plain incompetents. I often wonder whether they fairly represented the constantly shifting ranks of the profession, and if so, what earthly power could have restrained the laity from turning in a body to Christian science or something even less promising. Yet, it is probable that the beseeching arms of motherhood have extended in desperation to each of them, that they, as trusted messengers of hope, have conjured with death when the task was one for all that man has of knowledge, skill and prudence.

But, fortunately, there were others; fine fellows, gifted by nature, well trained and unimpaired by frailty; and certain supersessions having occurred in our neighboring town, we now number five as loyal, congenial and prosperous physicians as can be found in any place.

And Now!

I own my office of five rooms and adjoining residence, both having modern heat and light, a third of the largest drugstore in this vicinity, besides two city lots and a ten-acre orchard, in embryo, in Oregon. My office contains practically everything of assured diagnostic or therapeutic value, supplemented by a library of over three hundred volumes and fourteen current medical jour-

nals. My practice is general, with gynecology, obstetrics and venereal diseases slightly in the lead.

My income is sufficient to satisfy a far greater ambition than mine, and with perfect health, many friends, a beautiful home, and a little leisure, Alaska is indeed a very agreeable place in which to live. Magnificent scenery, an abundance of game, and the possibility of every creek containing gold are endless sources of physical recreation. My talking machine reproduces the world's best music, and my books afford inspiration, consolation or entertainment at will.

The object of this rather intimate epitome in which the personal pronoun appears with distressing frequency is not to encourage the migration of physicians to Alaska. Here, as elsewhere, there are more than enough physicians to supply every want. But I do not believe the practice of medicine is over-

crowded anywhere with the right kind of men—men to whom the practice of medicine is not only an art and a science, but a gift and a benediction, and who camp on the trail of opportunity and recognize its appearance.

While we, in remote localities, are unable to contribute much of value in the line of original research, we can apply all the knowledge gained thereby as skilfully, as effectively, and with perhaps more appreciation than the originators. And if I understand the matter rightly, it is for this single purpose, that is, the broadest possible application, that the struggle for advancement in medicine is being made. Proximity to its source does not in every case enhance the utility of a discovery. I expect to use arsenobenzol as successfully here as I could in Berlin, and it is certain I shall derive more satisfaction, have less competition, and get greater compensation in Alaska. []

Doctoring in Hawaii

The Delights and Trials of Plantation Practice

By E. S. GOODHUE, M. D., Holualoa, Hawaii

Appointed Delegate of the United States to the International Conference on Leprosy, Norway, 1910; also by the Governor, as special representative of Hawaii to the same conference; member of the National Committee, International Congress on Tuberculosis.

THE government physician in Hawaii is no longer a sinecurist; he has work to do. In districts where there are sugar plantations he gets a small bonus for his government service, but is paid fairly well by the sugar companies for his attendance upon their laborers.

In districts like the Konas, where the small corporations do not pay a physician, the government salary is somewhat larger, though still absurdly small.

The Government and the Plantation Physician

Formerly in locations like Lihue on Kauai and Wailuku on Maui the government physician, besides his salary of \$100 or more a month for treating indigent patients, received all the way from \$300 to \$500 a month for plantation service. He was

furnished a house, and sometimes servants, wood, and shown many favors. He was paid extra for postmortems, treating prisoners, examining coffee shops, while he received good fees from white patients in the district.

Some of these physicians easily made from \$800 to \$1000 a month, with no bad debts.

But changes, which began before annexation, have been rapidly taking place, and now few plantations pay \$150 a month, many not over \$50, for a great deal of work which is not the most satisfactory to a conscientious physician.

Every day and perhaps twice a day he must visit the camps where he examines, diagnoses and treats from fifty to one hundred cases, natives, Japanese, Portuguese, Chinese, Koreans, Porto Ricans, Filipinos and various foreigners.

Many of them are stupid, obstinate even, and seldom carry out directions as given. Among some of them, at least, the afflictions are due to want of care and cleanliness. This cannot be charged to the Japanese, however, who bathe daily.

The Prevailing Diseases

Ringworm in its various forms; tinea versicolor, eczema and syphilides are common, and so are scabies, boils, and many



Dr. Goodhue and his office boy and girl

skin affections due to infection. At certain seasons, particularly from October to January, influenza, bronchitis and sometimes pneumonia prevail among the natives, and in the camps there may be an epidemic of typhoid fever. Plague seldom occurs outside of Honolulu or Hilo, though in 1902 I had an epidemic among the Japanese on Kauai, where eight died within a week. The history of this short-lived epidemic may be found in the Public Health Reports (Washington) for that year.

Until the present time diphtheria has been occasional and sporadic in Hawaii, but a few weeks ago an epidemic, traced to some Filipino immigrants, broke out on Nani, where some ninety cases occurred, resulting in about twenty-seven deaths.

A special officer of the Board of Health is on the ground with antitoxin, and already the epidemic is quieting.

Last week I had a case of diphtheria in a Japanese family at the plantation camp, but immediate segregation, fumigation and disinfection, with free use of antitoxin, has prevented any spread. Preventive measures were taken with the other members of the family (the child died), and a long incubation period was allowed. This is the only way to deal with such a disease in such communities as these. I stopped all "shows" or other assemblies where children would be thrown together.

The People of My Districts

The two districts over which I have jurisdiction include a large area, reaching from Puuanahulu on the north to Milolii on the



Little Hawaiian and big guitar

south, a distance of about seventy miles. The average width of the strip is fifteen miles. We are on the side of a mountain, the road, at an elevation of 1350 feet, run-

ning around the island, a circle of 210 miles. There are shorter roads to different points, and hundreds of trails leading up the mountain and down to the sea. Scattered here and there along these roads are villages, as well as along the beach, with



Products of Kona

isolated dwellings—grass huts, bungalows, cabins—almost everywhere up to 2000 feet.

The principal industry in Kona is coffee growing, followed chiefly by Japanese and Portuguese. The few Chinese are generally traders. The natives live in shacks on their *kuleanas* (holdings), or in plantation camps. They work as need be on the sugar plantations, or grow a little *taro* on their lands, but they do very little farming of any sort, preferring to earn a few dollars by work in the sugar-fields, then spending it at the shops. They either buy their *taro* there, or get their *poi* ready-made from the Chinese.

A few natives occupy really good houses, but even these live in the simple Hawaiian fashion, sleeping on mats on the floor, and eating outside, squatted in Indian style.

Many of the plantations provide good hospitals for their laborers, with trained nurses in attendance, but generally such provision is inadequate, and the government hospital serves for the necessities of the plantation. Here in Kona I have my own hospital (the expenses of which are just now being paid by the county) for indigent typhoid patients. At the end of each month the plantation doctor gets his pay in the form of a draft

signed by the manager, but it does not pay for some things.

If the manager is an agreeable as well as a just man, it may be that the physician will stay and like his work; if the manager is such, as he has often been in the past, the path of the most able and conscientious physician will be strewn with thorns. Most of the physicians in Honolulu and outside have been plantation doctors at some time of their career. The present president of the Territorial Medical Society was a government and plantation doctor for nearly twenty years.

To be told gruffly to do this; to be charged not to do that; to be told that your drug order is too large; that too many of the laborers are sick; to be made to feel ever so delicately that the manager is the "boss," even of your medical matters, is bad enough; but to be subject to discharge at the whim of the ignorant or drunken poltroon who may be manager, is worse. However, there are many good managers, and they are growing better and better under American influence. The bad ones are all going back to Germany, Porto Rico or Timbuctoo.

There is a centralized board of health in Honolulu having charge of the medical and



Hawaiian canoe and outrigger

sanitary matters of the territory. Hon. Mott-Smith, president, is an unusually able and conscientious executive officer, keeping close supervision over his subordinates.

On Hawaii there is an efficient chief sanitary officer located at Hilo, the principal

town. He supervises epidemics, manages rat and mosquito campaigns, and, with the local Public Health and Marine Hospital surgeon, has charge of the tuberculosis crusade just being started. It may be said that we have just awakened to the need of such a crusade on these islands.

An Anti-Tuberculosis Campaign]

Four years ago I sounded a note of alarm by letters to the president of the Board of Health and to the Governor, and by the organization in Kona of an Antituberculosis Association, of which I was made the secretary. I endeavored to organize a central society among the physicians of Honolulu, but could not arouse interest in the minds of more than half a dozen of them. I had articles in various medical journals in the "States." I was encouraged to persist in the face of discouragement by the cheerful letters of Dr. Fulton, our national secretary. A year later, under a new governor and president of the board, the matter was taken up, and several physicians who refused to act before began to lecture and write on the subject. Now there is a regular official organization, and a physician gets a salary for his supervision.

My importunity for a sanatorium, to be located in the best place for it, has so far been ineffective, but there is a sort of institution near Honolulu where indigent patients receive careful and intelligent treatment, but the location is not the best that Hawaii affords by any means.

Until within a year or two, it has been the policy of the government to arrest and remove to the Leper Settlement at Molokai all lepers from the various islands. Each government physician was required to examine "suspects," send them to Honolulu for expert reexamination, where, if they were found to be really lepers, they were ordered to Molokai. This policy has fallen into desuetude. A more humane and, I think, a more scientific and efficacious method will be pursued in the future, a method which Dr. Koch heartily approved of when he was here.

About three years ago, under the old system, and by order of the Board of Health, I detained a suspect in our pest-house, and

made arrangements to have him taken to Honolulu. But by legal process it was found that we had no longer a right to detain even a suspect, without a formal warrant, nor to arrest, and the man sued us for damages, and, what is more, secured them. It was a test case, and I had to pay the amount, which has not yet been returned to me, but may be at the next legislature, which meets in February. This ended active segregation.

Hawaii Not a "Bed of Roses"

Although life in Hawaii may be enjoyable, for the physician it is not in any respect a bed of roses.

Besides attending to all indigent patients in his districts, he practically treats all natives free of charge, since they don't pay anyhow. He is coroner; is sanitary and health officer for his locality; does all the postmortems; is registrar of births, marriages and deaths; grants all death certificates; examines all coffee shops, laundries, hotels and boarding-houses, granting certificates therefor. He has (in my districts) to visit each year thirteen schools; examine over one thousand children and keep them all vaccinated; make out certificates of health for each, as well as for all teachers. He must keep an office and equipment, telephone, horses or an automobile at his own expense; travel as far as forty-five miles to see a patient up the mountain or down to the sea, all for \$125 a month!

In epidemics he is expected to work day and night without extra pay, and as it has been in our recent typhoid epidemic, fumigate houses and bichloride floors.

But, as I said, life in Hawaii may be extremely enjoyable. Those who have homes here live under balmy skies all the year round. The climate is about perfect.

There are no storms, no cold, no heat, no dust, no disagreeable outdoor features. The country is salubrious. There is immunity from many of the diseases of colder and hotter countries. The residents are kindly, unusually hospitable and charitable. We are one great family, with bickerings and small quarrels, it is true, but loyal withal. We stand for each other. And to the man of discernment and sympathy, no small part of the advantage of living

in Hawaii is his contact with the native Hawaiian. He may be a "mere child", and as irresponsible in business matters; he may be dilatory and even lazy; he may be unfitted to administer law or justice; but he is simple, and sweet, and altogether lovable.

I grant that as a patient he has no faith in you, but neither has the Christian scientist or the buyer of patent medicines. The Hawaiian acquiesces in the wisdom of your advice, but he never follows it; he accepts your directions with a smile of gladness, but the minute he passes out of your gate he forgets all that you told him, and most likely throws away the nasty concoction you placed in his hand so carefully. He will continue to eat his accustomed food and drink his favorite beverage, and, if he gets worse, will call in the native doctor, the *kahunā*, and pay him a good fee for his incantations. Sometimes, if he has a "small" pain, a toothache or a slight cold, he may call you to come ten miles or more in a great hurry, but if he is really ill you may not hear from him.

Yet he is a pleasant neighbor, greets you with a smile, and even if he hates you (which I much doubt he is capable of doing), he will be sure not to let you find it out. If he signs a petition against you, it will not be because he has a grievance, but simply for the reason that he does not want to refuse to sign his name when he was asked to do it by some disaffected Portuguese or *haole* (foreigner). If you go around the next day with a counterpetition, he will sign that, and then feel that he is entitled to your gratitude. This trait is well known by designing men who have a personal grudge.

If a manager falls out with his doctor and wants to get him out of his government position, he goes among the natives and gathers their names. It looks very formidable to see several hundred names petitioning against the man who is serving the petitioners. There are natives who will not sign such a petition, to their credit be it recorded.

The Hawaiian language, although somewhat guttural, is soft and musical when spoken by sweet-voiced natives. Two consonants are always separated by a vowel, and every syllable or word ends in a vowel. A peculiar little grunt is sometimes given,

a hitch between two vowels, and this makes the word mean something else. For instance, "*Au*" is "ax-handle," but *a'u* means "mine." The vowels have the Latin sound, the "a" as in father.

Like the proper names of nearly all rude languages, the Hawaiian are expressive and significant, as, for instance, Mr. Levaipale (Voice-Eating-Hat) or, in other words, Mr. Talks-Through-His-Hat. There are long names too. In my note book I find the record of a visit from Mr. Kalaninuia-hilapalapala. The word "tabu" (taboo) has long been incorporated into our language, and the beautiful common salutation and farewell, *aloha*, which expresses every form of endearment you may desire, might well be adopted into our more rigid language. Another word quite as useful to the resident of Hawaii is *pilikia*. It means trouble, bother, annoyance of any kind. If you fall and break your metacarpal bone, as I did the other day on my way to see a native with toothache, it is *nui pilikia*, great trouble. The word is derived from *kai*, the inner post which supported the ridges of their huts, and *pili*, close to, or crowded against; hence, "crowded against the post," as the inmates often were in small huts—hence trouble.

The ancient food of the native was simple and wholesome. It consisted of *poi*, a paste made from *taro* (*arum esculentum*) and fish. The *poi* and fish, where it is possible to secure them, are still staple articles of diet, but many *haole* foods are now bought, meat—canned fish, salted salmon, condensed milk and bread, while paste is made of flour, to take the place of *poi*; and much liquor is consumed.

The effects of this mixed diet are plainly to be seen in the new generation of Hawaiians. It is as much a cause of degeneracy as specific disease, clothes and bad associations.

To a limited extent the natives practised tattooing. It was indulged in on special occasions of bereavement or as a token of regard.

As we might expect, the ancient games were many. The merry people bathed and rode on surf-boards, as they do now; but they also had boxing matches attended by as many as ten thousand persons. The matches were quite up to anything in the same line

nowadays, and, after the affair, the participants often died.

There were wrestling games, races, and at the *Makahiki*, or New Year's festival, much betting was carried on.

Some of the more manly games were the *maika*, the *holua* and other out-of-door sports. In playing *maika*, a round polished stone disk, called the *ulu*, was rolled along a hard, smooth track extending for half a mile or so. The fun was to send the *ulus* as far as possible between two sticks placed on each side of the track. The man who rolled his disk the straightest and farthest won.

Writers have said, rather facetiously, that the ancient Hawaiian wore his skin chiefly. He has little more today when he is out on the beach for a holiday. He wears the *malo*. Groups of bathers of both sexes, from eight years to twenty, may be seen in the fresh-water streams as you pass along the country road, all stark naked and as modest and unconscious of any impropriety as infants. Clothes have hurt these innocent people more than anything that civilization has brought—not only in inducing notions of immodesty, but in making them susceptible to colds from want of care in changing.

For Hawaiian women the *holoku*, of

exaggerated Mother Hubbard, is particularly adapted. Within its generous folds their unrestricted proportions may still expand. No corset, no knitted chemise, nothing but a second dress slightly shorter than the first, and, during menstruation, a *malo*, or loin-cloth. Stockings and shoes are dispensed with; garters, straps, suspenders, layer after layer of waists, corset protectors, petticoats, and what not, all done away with.

What halcyon days for the liver, the stomach, the lungs, and all their helpless ilk! The word *holoju* is suggestive; it means, "I can run, I can jump."

Have you ever pictured to yourself what catastrophe might overtake the woman of fashion were she, not to run and jump, but just stoop low enough to buckle her shoe?

I could say a great deal more about my Hawaiians, but space forbids. I will only add that they are law-abiding. Jarves says that up to 1840 there was only one instance of a native attacking a missionary, and that was for booty. A white woman, a woman of any race, is safe anywhere, at any time of the day or night, from insult or molestation of any sort from Hawaiians. There is no record, I believe, of any woman having been assaulted by a Hawaiian.

Conditions and Medical Practice in Bolivia

As an American Doctor Finds Them

By CHARLES W. FOSTER, M. D., La Paz, Bolivia, S. A.

LA PAZ, the actual, though 'not the constitutional, capital of Bolivia, is a city of nearly eighty thousand inhabitants, the great majority of whom are Aymara Indians. The bulk of the remainder of the population is composed of mestizos, the whites numbering about five thousand, among whom there is a considerable sprinkling of foreigners of nearly all nationalities.

How to Reach La Paz

La Paz is most easily reached from North America by way of the Peruvian port of Mollendo. From there it is half a day's

ride by train to Arequipa, a quaint old Spanish town, situated in an oasis of the desert, at an elevation of 7500 feet. From this city it is a day's ride by train to Puno, on Lake Titicaca. The first part of the ride is through barren mountainous country, then one comes up into a great broken grassy plain reaching an elevation of 14,666 feet at one point and later passing on a narrow ridge between two good-sized lakes at an elevation of 13,555 feet.

Puno, one of the principal ports of Peru, is situated at an elevation of 12,495 feet. The lake is about the size of Lake Erie. Leaving the train at nightfall, one goes im-

mediately aboard a small but well fitted-up lake steamer. It takes about sixteen hours to reach Guaqui, the port on the Bolivian side of the lake. The scenery on the placid lake in the clear atmosphere of this altitude is most beautiful, as there are mountains, islands and peninsulas on all sides. On the east is an unbroken range of mountains with snowy peaks rising to altitudes of from 20,000 to 25,000 feet.

During the voyage, after crossing the Bolivian border, one passes the Island of the Sun, where, according to Indian legend, the sun first appeared as the clouds broke after the Deluge, and whence, thousands of years later, the Inca started on his wanderings to Cuzco, there to found the empire that at



Proposed route of the Pan-American railroad

the time of the coming of the Spaniards extended from what is now the Argentine Republic to the Republic of Columbia.

After continuing the voyage for several hours more, one disembarks at Guaqui, and after three or four hours' ride on the train gradually ascends to the edge of the great plateau of Bolivia.

The train stops only a few yards from the edge of the gently rising plain, and there is broken up into sections to which are attached trolley cars. As the various train

sections begin to move, the traveler finds himself winding down the face of the precipice, and he catches his first glimpse of the red tile roofed city of La Paz stretched like a panorama 1500 feet below him and sur-



Crossing the Andes

rounded by the green garden patches of the Indians; while beyond, as a fitting background to the immense ravine in which nestles the city, he sees the snow-covered top and sides of Mount Illimani, rising majestically to a height of 23,000 feet.

The descent of the road bed has a maximum grade of $6\frac{1}{2}$ percent, and it takes half an hour through winding curves, passing on the way fills and cuts, to reach the station at the upper end of the city. A few minutes' drive brings one to the central plaza of the city. On the lower side may be seen the rising walls of a cathedral which has been in process of construction, on and off, for the last seventy years; a municipal tariff of a few cents on every package of mer-

chandise entering the city furnishing annually some \$20,000 toward its completion. Next to the cathedral is seen the President's palace, and on the east side of the plaza the



A church in La Paz

recently constructed congressional buildings. The rest of the plaza is surrounded by mercantile establishments of various kinds.

The streets of the city are, many of them, very steep and are paved with cobble stones. The sidewalks are paved with flagstones and are usually just too narrow for two people to walk abreast comfortably. It has been quite a problem on account of the steepness of the streets to find a way for the recently constructed electric streetcar line to pass from one end of the city to the other. The houses are mostly of adobe, and the walls of some buildings are about three feet in thickness and have stood for centuries. The roofs are of red tiles. Some of the more recent structures are four stories in height, and as more bricks are now being used their walls are less solid. These new buildings are usually roofed with galvanized corrugated iron and so form a sharp contrast in color with the tile roofs.

Toward the outskirts many typically Indian houses can be seen. The rooms of these are built each one separately with adobe (or mud) walls, there being no windows and only one door. They have thatched roofs, on the top of which may be seen a small wooden cross standing in an earthen bowl, which probably at one time contained offerings of native beer made to the spirits of the place.

The tillers of the soil are exclusively Indians, under a system of serfdom. In the cities they serve as house servants for the more menial tasks, and as common laborers, bricklayers, and carriers. The men wear woolen caps with large flaps over the ears, and usually, out of doors, felt hats over the former. They also wear a tight-fitting vest-like jacket. The trousers are made to project on each side at the hips, while the legs reach about half way from the knee to the ankle and are split up the back for over a foot, showing white cotton drawers beneath. They usually wear sandals. A poncho is also worn in cold or wet weather. The women wear hats similar to those of the men, and usually two shawls, in one of which they carry bundles. Their short woolen skirts generally are dyed a brilliant yellow, red, purple or green.

The cholo, or mestizo class, are employed as cooks, servants, artisans, and shopkeepers. The dress of the men is not distinctive of their class, as is that of the womens. The latter wear bright, variegated shawn,



A type of "Chola"

and, like the Indian women, may usually be seen carrying on their back either a bundle or a baby. They wear short, heavily pleated skirts of wool for ordinary wear, but silk for feast days. These garments they pile one over the other until they stand out to an extent that makes strangers think they are distended by crinolines. They are even more given to the employment of bright colors than are the Indians, being especially fond of shades of yellow and green. Sometimes they wear high-heeled boots, but more often only slippers. They wear long pendant earrings of gold and pearls.

The different classes of society have their distinctive holidays. For instance, on the first of November, the girls and young women of the upper classes parade the Alameda, their servants frequently carrying or wheeling in baby carriages immense wax dolls of life size. The next day the Chola women dress up in their finest and visit the cemetery. On other occasions, the Indians have feasts in which their dances form the chief feature. Accompanied by the music of reeds and drums and the waving of flags they dance and march from place to place, the principal dancers wearing gorgeous feather head-dresses, hideous masks, breast-plates of tiger-skin, and so on; or one may be seen dressed in a bearskin with long tin claws on his fingers.

The people generally have great ability for learning languages. They are also very fond of music. I have seen a double row of army musicians drawn up along the entire front of the plaza, which is a block long. Sundays and Thursdays the bands play in the plaza and in the Alameda while the people parade round and round listening to them.

Pneumonia is the disease most dreaded here, but although frequent, it is not especially fatal. Most persons attacked recover, so far as my experience goes, if properly managed; especially if treated promptly with a preliminary cleansing of the intestinal tract by means of calomel and podophyllin, followed by suitable laxatives and intestinal antiseptics. After that I give aconitine, strychnine, and digitalin as indicated by the fever and pulse, and apply hot fomentations locally, alternating with appli-

cations of camphorated oil on a cotton jacket.

So deep-rooted is the fear here of pneumonia that the natives frequently attribute any pain in the thorax to that cause. I have had one man tell me that he had had pneumonia for a year. A myalgia or an intercostal neuralgia, for this reason, causes great alarm to the sufferer, who fears that he is about to die of pneumonia.

Smallpox is endemic and often epidemic. A favorite application to allay the itching of the pustules which is much used by the doctors here is ichthyol ointment. Most of the fatalities are among children. Vaccination, however, is compulsory. Foreign vaccine is seldom obtainable and does not bear the long voyage through the tropics well. The government manufactures vaccine for free distribution among the medical profession and maintains free clinics for vaccinating; but the virus, while sometimes excellent, is more frequently worthless.

The newer part of the city is supplied with most excellent spring water; but the supply for the older parts is liable to contamination before entering the distributing pipes; so in that part of the city occasional cases of typhoid fever occur, but not nearly so frequently as in many South American cities. In some of the villages it sometimes becomes epidemic, decimating the population. A mild form of dysentery is frequent, especially during the fly season.

La Paz has a crude sewerage system, consisting of covered stone-lined ditches that empty into the creek flowing through the center of the town. Most Bolivian cities have no such provision. Water-closets are luxuries to be found in only a few of the better-class houses in La Paz. Large towns may be found with scarcely even a privy in them.

The climate of La Paz is cool, owing to its immense altitude; but the coldness and dryness from which one otherwise would suffer is somewhat modified by its being situated in the only canyon which cuts its way entirely across the eastern ridge of the Andes, in such a manner as to allow of the water that falls on the western slope of Mount Illimani to reach the Amazon eventually. This opening through the mountains

allows the warmer and moister air of the eastern slope to reach our city.

In high altitudes like that of La Paz (12,000 feet or more), in the dry season, the exceeding dryness of the rarified atmosphere is very irritating to the nose and throat, to such an extent, in fact, as frequently to force one to mouth breathing. Mouth breathing seems to be the rule among the Indians here. When lying down, this drying process sometimes extends even to the

lungs, diminishing their power to absorb oxygen and causing an air-hunger that prevents sleep. Water snuffed into the nostrils gives immediate but only temporary relief. Protecting the nostrils from the excessive dryness by means of liquid vaseline applied before retiring is much better. After one has been in this country some time, the discomfort from this cause is not so great, as the tissues become hardened to the atmospheric conditions.

Some Extraordinary Surgical Cases Reported From Siam

By CHARLES H. CROOKS, M. D., Me Ping River, Siam

CASE 1.—Female, aged twenty. General health good; general characteristics slightly masculine, otherwise normal. Complaint: had never menstruated. Examination showed normal pudenda with no hair, but pubic hair is scant or even entirely absent in normal individuals among these people. Closer examination showed a normal vagina with only a slight enlargement of the tissues at the site of the cervix; no uterus or ovaries of even the most rudimentary character. While I had no colleague to verify the diagnosis, I made a very thorough examination both by speculum and bimanual methods. As this was the second case of the same nature which came under my observation during my sojourn of six years in Siam, I took especial precautions to assure myself of a correct diagnosis. As to whether such abnormalities are more common among the Orientals than Caucasians, I presume there are no available statistics obtainable, nor could authentic ones be compiled. I have heard of no similar cases from the other physicians in the country, and I am sure all the cases among Europeans and white races do not come to the attention of physicians.

Case 2. Male child, age four days. General development normal; general appearance normal; slight general jaundice. Complaint: no anus. Examination showed slight enlargement in the median raphe corresponding to the connection of the rectal

mucous membrane with the integument, but without an opening.

An incision was made at the anal site, but I failed on two successive days to distinguish any gut, mucous membrane or rectal cul-de-sac. Of course, the age of the patient was against the success of such an undertaking, although the assistant succeeded in securing profound anesthesia without accident. The child passed from under our observation on the seventh day after birth, and it died at about the age of ten days. I was denied the privilege of a postmortem examination.

I have the authentic report of a similar case. This child was born several years ago, some twenty miles from this city. My assistants report a case of a female child 10 or 12 years old living in the city, in whom the fecal discharges pass out at the vulva.

Case 3. Male child, thirty-one days old. General development normal; general appearance that of suffering from some abnormal irritation, manifested by continual straining but without cries of pain. Patient arrived at hospital at 8 p. m. Examination showed the entire small intestine extruding from an opening at the navel. The attendants reported that the child had begun to strain about 5 p. m., and that the intestine had been extruding from the abdomen about two hours, when they reached the hospital. They also reported that the navel had healed normally after birth and that the child had

been perfectly healthy until the day they came for treatment.

We put the patient under anesthesia at once, enlarged the opening, replaced the intestine, and closed the wound. Under anesthesia, we could find no evidence of bowel obstruction, and the bowels were reported to have moved that day. The intestine was tympanitic, but otherwise normal. There was a tight foreskin, but no evidence of irritation, and the child was urinating normally. The scrotum was slightly edematous, but showed no evidence of abdominal contents within. The patient died nine hours after the operation. We were not granted the privilege of a postmortem.

Case 4. Male, about forty years; history of frequent manifestations of insanity. Two days before coming under our observation he had decided to "carve up" his wife with a sword, but failing in the attempt, he turned the weapon upon himself. He reached the hospital at dark, forty-eight hours after the accident, having been carried about seven miles through a hot sun. He was able to speak and take food.

The cloth with which the wounds were covered was one which a disciple of Lister would not have chosen for the purpose, but the chooser in this case happened to be rather a disciple of economy and hence chose a cloth too old and dirty for further use. The cloth in question and the odor of the wounds did not look like a likely escape from peritonitis if the wounds were immediately closed. Hence we decided to apply weak warm bichloride applications during the night and see what day would bring forth.

Next morning, sixty hours after the accident, we put the patient under anesthesia and began to repair, first a wound five inches long over the stomach, from which the organ had extruded and was entirely outside the abdominal walls. The viscus also had two perforations, but was filled with liquid which the patient vomited when we pressed the organ back into the abdomen, and which proved to be clotted blood. From a stab wound a portion of the lower end of the right lung was extruding; a portion of this, about one inch in length, we removed, as it was already dry and dead. A third stab wound over the apex of the heart came in contact

with a rib, and upon that same rib probably hangs the "possibility of this little tale." A few other wounds of no special importance were cleaned up, and the larger ones closed.

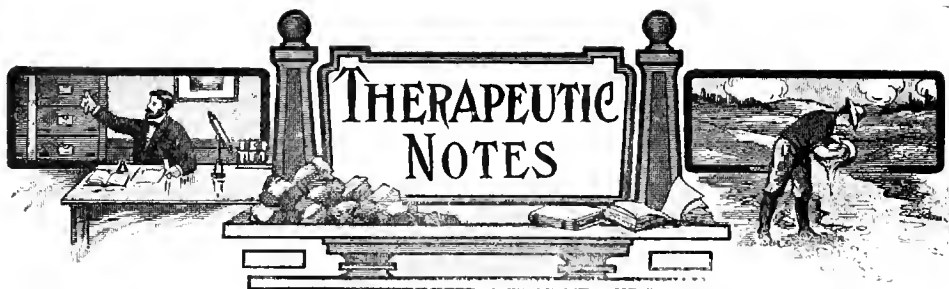
On Saturday, the fifth day after the operation, the attendant went for a visit in the market; having grown tired of his confinement, patient sought exercise by "hitting the pike" for his home village seven miles distant; at which place he duly arrived, but could not be induced to return to the hospital. At last reports he was living happily with his wife, and all that either of them has to show for the experience are the scars.

Case 5. Male, age about thirty-eight; gored in left groin by a caribou. He was carried about four miles from his village and arrived three hours after the accident. While passing through the city market, he was informed by the observers that he was "already dead." These observations were, of course, comforting to his heart, as was also the ingratitude of the caribou upon whose horns he was tying a piece of cotton, a cigarette, etc., as an offering to its guardian spirit for the seeking of its own protection while loose in the jungle after the plowing season. This offering was also for the purpose of appeasing the anger of the animal for the curses and lashes he had applied.

As to the latter, the caribou succeeded fairly well in getting even with its tormentor.

Upon examination we found about a full third of the small intestine extruding from a puncture in the abdominal wall. By slightly enlarging the wound we were able to replace the intestine and examine for further injuries, which however proved to be nothing greater than slight contusions as manifested by moderate congestions. Before replacing the organs, we took the precaution to soak them well with a 1 : 1000 bichloride solution. Recovery was uneventful.

The first three cases I have cited for their interest as "smacking" of rarity. The latter two, to prove the Listerian theory of antisepsis, and, further, to suggest the probability of a certain immunity of those races which have lived for centuries under unsanitary conditions, from infectious germs entering through wounds. In the last case the bichloride was rather strong, but we chose this chance rather than peritonitis.



TANNIN GLYCERITE FOR HARDENING THE NIPPLES

The best application to toughen the nipples previous to confinement (*The Medical World*, Dec., 1910, p. 474) is the glycerite of tannin. This is readily extemporized by warming glycerin in the water-bath and stirring in tannic acid till the mixture has the consistency of thick syrup. It is best to prepare it in the jar in which it is to be kept, as it is rather difficult to mix properly in a bottle, and it is desirable not to cause any more cleaning up to do than is necessary and by mixing it in a mortar.

This glycerite is applied by rubbing in thoroughly, pulling and kneading gently at the nipple, for ten minutes night and morning, for two months previous to confinement. When this preparation is so used, there will rarely be any but the slightest complaint of tenderness when the baby nurses.

PHYSIOLOGIC ACTION OF PERISTALTIN

Peristaltin is a water-soluble glucoside obtained from the bark of cascara sagrada, chemically different from the glucosides of the anthracene group, found also in aloes and senna, which latter act detrimentally upon the kidneys; also, they cause griping and pain. Animal experiments, according to *Therapeutische Monatshefte* (1910, No. 1), have given the following results:

Given to rabbits, in doses of one Gram or less, by mouth, peristaltin causes a moderate diarrhea in the course of two to three hours, and in slightly shorter time if given hypodermically. The diarrhea was always followed by albuminuria, which persisted longer than the diarrhea itself. Both phenomena disappeared without leaving any

traces, and the animals, which were depressed while the diarrhea lasted, soon revived.

In order to disprove the theory that the albuminuria in rabbits was due to their vegetarian diet, the experiment was repeated on horses, and here no albumin was found, although the horses, like the rabbits, reacted to comparatively small doses. The rabbit is simply a poor experimental medium in this respect.

The experiments on dogs were encouraging. One-half centigram given to a puppy, or 1-2 to 2 centigrams to a full-grown dog, caused abundant stools, not always diarrhea, in the course of half a day or so if given by mouth, and in much less time when given hypodermically. In no case was albumin found. The dogs had no appetite while the action of the drug lasted and showed signs of slight gastric irritation, but recovered quickly.

The conclusion is that peristaltin is a gentle laxative, which can be made to act quickly by giving it hypodermically, that it causes no griping or pains, and that it is perfectly harmless to the kidney even when subcutaneously administered.

THE BANE OF THERAPEUTIC NIHILISM AND LABORATORY DOMINANCY

H. C. Sawyer of San Francisco, in *The New York Medical Journal* for December, 1910, truly says that, unfortunately, therapeutic nihilism is dominating scientific medicine, while even experimental pharmacology has migrated too far afield from the clinic. "Many of the observations of the clinicians," he says, "are rejected by the laboratory investigator unless accompanied by proof tantamount to a chemical reaction. If such

scientific control is permitted, we shall only heed the call of the laboratory which substitutes a test-tube for the patient. As the matter now stands, we must ascertain the pathology of a disease before we can contribute anything concerning its therapy, and all this despite the fact that the diseases of which we know the least are the diseases which we treat most successfully."

RESTORATION OF LIFE

Abrams has recently made a study of and described the remarkable restoration to life of seemingly dead persons, as practised by the Japanese.

When a man has been knocked out, beaten senseless or apparently killed, even by a sunstroke or drowning, the restorer rolls the patient on his face, extends his arms sidewise, and strikes the patient on the seventh cervical vertebra with his wrist, severely and regularly, until the patient recovers consciousness. He is then at once placed in a sitting posture, his arms are rotated, and he is aided in walking, since otherwise he will relapse into unconsciousness and usually die for good.

This pounding of the seventh cervical vertebra has been found especially beneficial in some acute cardiac affections. The effects seem, at times, almost miraculous. There is as yet no distinct explanation of the matter.

THE FOUNDATION OF GALLSTONES

Dr. A. Rose writes, in *The Therapeutic Record* for June, 1910, as follows: "Two conditions are necessary for the formation of gallstones—bacterial infection and stagnation of bile. Infection alone may cause cholecystitis (Dr. Rose claims that the term cholecystitis is incorrectly formed) but never chololithiasis, if there is no stagnation. Bacteria do not thrive where there is free elimination.

THE TREATMENT OF ECLAMPSIA

Fr. J. Plondke (*Jour. Am. Med. Asso.*, Jan. 14, 1911) treats his eclamptic patients by dividing a prominent superficial vein,

inserting a cannula into each end, and after withdrawing from ten, fifteen or more ounces of blood, injecting one to two quarts of normal salt solution. The ends are then tied, and the vein is obliterated. He has employed this treatment in ten cases—seven puerperal, two of convulsions in chronic nephritis, and one of subacute nephritis—with the result that the convulsions ceased at once, while in not a single instance did they reappear.

VENESECTION AS A REMEDIAL PROCEDURE

Dr. Burwinkel of Nauheim (noticed in *Muench. Med. Woch.*, 1910, No. 34) recommends venesection, not only in disturbances of the circulation associated with plethora, for instance in pneumonia, uremia, and eclampsia, but also in articular rheumatism, in migraine, epilepsy, and in chlorosis, advocating the removal of from 80 to 122 Cc., in gout and in a number of skin diseases (e. g., furunculosis). He is, moreover, of the opinion that venesection exerts a prophylactic effect upon arteriosclerosis and in premature senility. In children, he suggests as a proper amount of blood to be removed, 10 Cc. for each year of life.

MANAGEMENT OF CARDIAC INSUFFICIENCY

Dr. J. B. Guthrie, in an instructive paper on this subject (*New Orleans Med. and Surg. Jour.*, Feb., 1911) claims that the treatment of heart disorders resolves itself largely into treatment of the heart-muscle to secure a reserve of force. There is absolutely nothing to be done for a diseased valve, and even when kidney or vessels are first diseased the heart-muscle is the point toward which we must direct our therapy.

To this end, we must lighten the labor of the muscle by depleting measures, purgatives, diuretics if the kidneys are sound, rest in bed where possible; by the use of opiates if there is distress; by cutting down the consumption of fluids to the lowest limit. Digitalis prolongs the rest period in the heart-beat; but in most instances it is needed at some time or other. Rarely will nitrites have to be resorted to at the same time to

combat the constricting effect of digitalis. Arterial hardening usually means that the iodides will do no good.

Forced sweating is dangerous when the heart is decidedly weak; if done at all, it is best carried out with an ice-bag or a cold coil resting over the heart. Restriction of sodium chloride ingestion assists absorption of fluids, or at least hinders their accumulation. The heart-muscle must be well fed in order that it may build up, while food must be such as to cause the least possible increase of blood pressure.

CACTUS FOR THE IRRITABILITY OF THE FATTY HEART

Edward E. Cornwall of Brooklyn, N. Y., in *Medical Record*, January 14, 1911, page 50, writes of his success in practice with cactus. He says: "For irritability of moderate degree occurring in fatty heart, cardiac sclerosis and aortic sclerosis, cactus has seemed to me a particularly useful drug. I always prescribe the tincture of the green plant. Cactus has been classed among the heart stimulants, but I believe that it is better placed among the sedatives."

PAROXYSMAL NEUROSIS OF THE STOMACH AS A SYMPTOM OF CHOLELITHIASIS

H. Citron (reviewed in *Ther. Monatsh.*, July, 1910, p. 388) describes a case in which a patient who suffered for half a year of unbearable attacks of epigastric pain (spasms of pylorus and cardia) lost, during this time, several hundred gallstones. Each attack terminated with eructations, and during the attacks the motility of the stomach was greatly impaired. The author counsels to think of the possible presence of gallstones in paroxysmal gastric neuroses.

CLIMATIC VERSUS HOME TREATMENT IN PULMONARY TUBERCULOSIS

Dr. C. P. Ambler of Asheville, N. C., in a paper read before the Tri-State Medical Association, Richmond, Va. (*Charlotte Med. Jour.*, July, 1910), offered the following conclusions concerning the influence of climate in the treatment of pulmonary tuberculosis:

1. Climate alone cannot be depended upon for bringing about a cure.
- (2) Certain climatic conditions most assuredly are detrimental in the progress of the disease, therefore the opposite conditions are more desirable and offer a better prognosis.
- (3) A permanent change is more desirable than a short sojourn.
- (4) Climate is but an adjunct in treatment; every other means possible should be used in connection with climate.
- (5) More attention should be given in advising the patient what climate to seek.
- (6) The patient should be under supervision of a physician without regard to climate.

PNEUMONIA AND RATIONAL THERAPEUTICS

Discussing national therapy, a writer in *Folia Therapeutica* (Oct., 1910, p. 89) says that it must be confessed that rational therapeutics lags behind the progress of pathology. "The bacteriology of pneumonia, for instance," he writes, "is fairly well ascertained, but serum and vaccine preparations founded on this knowledge can claim but meagre success. By the time that the symptoms of pneumonia have become manifest the invasion of the system by the pneumococci has become so complete that nothing but a most powerful serum can possibly achieve any beneficial effect; but hitherto attempts to prepare either a germicidal or an antitoxic serum for pneumonia have only terminated in ineffective results."

"Then, continuing, he says, however: "Very definite success has attended the allied vaccine treatment when applied to a pneumonic process which threatens to become chronic. The unhealed sinus of an empyema may be effectually cured by injecting the appropriate vaccine, and pneumococcal lesions of a purulent nature in various parts of the body likewise yield to this measure."

THE RATIONAL TREATMENT OF SCARLET FEVER

Giving his experience with the treatment of scarlet-fever, M. B. Tuller, in *The Therapeutic Record* for December, 1910 (p. 319), says that aconite is indicated when the skin is hot and dry and the patient very restless. Belladonna is the remedy when there are

convulsions or there is other evidence of turgid meninges, such as drowsiness, stupidity, gastric derangement, and dry and hot skin. Calomel, in appropriate dosage, is indicated more or less throughout the course of the disease, for the reason that it inhibits toxemia, cleans out the intestines, and tends to promote diuresis. Calcium sulphide, he says, is highly recommended by some as an antagonist of the toxins of the disease, but he considers it inferior to calomel except when the angina is very severe, in which case the two may be alternated with advantage. Sparteine may be required to aid the kidneys, given in 1-10 to 1-5-grain doses every two or three hours. Castor oil every morning or every other morning assists in the work of elimination.

SILVER NITRATE POWDER FOR LOCAL USE

Baruch, in *Muenchener Medizinische Wochenschrift*, (cited in *Interstate Med. Jour.*, Dec., 1910), states that kaolin, when heated to 100° to 150° C., not only is rendered sterile, but finer and more hygroscopic. To kaolin he adds 1 percent of powdered silver nitrate. This mixture, according to Baruch, constitutes an ideal dressing for suppurating and gangrenous wounds. The odor ceases, the granulations become firm, and the growth of epithelium is stimulated. In the surgical clinic of the Berlin University, this powder has proven itself superior to all others for dirty and foul-smelling wounds. Its cheapness and its lack of odor are additional merits.

NEW REMEDIES OF 1910

Merck's Report for January lists ninety-six new remedies introduced during 1910. Among these we notice that already an improvement has been suggested for "606," which is said to be less toxic than the latter. No less than ten of these novelties are arsenic preparations, six are serums or other derivatives from animal substances, sixteen are antiseptics or germicides, nine are designed for use in syphilis, and seven for tuberculosis. The contributions from the vegetable world are limited to nine prepa-

rations from previously known plants, and five from new ones, all the latter being remedies for the bites of snakes. Crotalin is one of the most interesting of the entire lot.

Amenyl, which is, chemically, methylhydrastimide hydrochloride, is a new introduction that is said to be a powerful vasodilator. It has been used in amenorrhea, menstrual disturbances at puberty, and where local treatment cannot be applied. It is not an abortifacient.

Galegol, a preparation from galega, is marketed in the form of brown granules as a galactagog, the dose being three to eight teaspoonfuls.

CALX SULPHURATA

Schmidt and Engelhardt (*Merck's Report*) state that they examined 70 samples of calx sulphurata, including sugar- and chocolate-coated tablets, tablet-triturates, and gelatin-coated pills. Some were three years old. In no case had notable deterioration taken place. The average strength was somewhat above that demanded by the U. S. Pharmacopeia. This seems to indicate that the pharmaceutical handling of this troublesome salt has been mastered by some at least of the manufacturers of stock preparations.

RELATIVE VALUE OF OIL OF EUCA- LYPTUS

In *Merck's Report*, Binz urges the importance of cultivating eucalyptus trees for their oils. He asserts that in time eucalyptus will rank with gold and petroleum in making the reputation of California. Besides its applications in genitourinary surgery and the various specialties, he says that eucalyptus oil is a good antimalarial and antiseptic, a germicide, a stimulant to indolent ulcers and all mucous membranes, is a good pus destroyer and an insecticide.

All of which is important in so far as it is true; but eucalyptus is not nearly so efficient as are other volatile oils. Experiments made with a large number of these showed that oil of cassia ranked first, with oil of cinnamon closely following. Eucalyptus, gaultheria and turpentine were well down the list.



Vomiting: Its Nature and Treatment

IT is not always known whether a case of vomiting is owing to an organic condition or to a simple nervous trouble of the stomach. This fact often compels the physician to make his treatment purely symptomatic.

Vomiting usually precedes and is announced by the reflex of nausea, which is so frequently observed in the female sex, even without vomiting following. According to Boas, nausea in the aged person frequently accompanies headache and vertigo and is connected with arteriosclerosis, prostatic hypertrophy and slow uremia. In persons with stomach ailments, such as stasis due to pyloric stenosis, gastritis, ulcer, cancer, pronounced atony of the organ with flatulence, nausea often is very easily provoked. In the female, the uterus plays a decidedly provoking part. So also puberty, menstruation, pregnancy, the menopause, and ulcerative metrorrhagias induce nausea on the least physical excitement, especially where there is either enteroptosis or nephroptosis.

Nausea usually results in loss of appetite. Nausea disappears during sleep and diminishes, singularly enough, in the dorsal position. For the relief of this symptom the dosimetric arsenal offers the monobromated camphor, 20 or 30 a day; or cocaine, narceine, or zinc valerianate.

It must be remembered, also, that the entozoa, and principally the tapeworms, may give rise to this reflex symptom, and should cause us to think of koussein, pelletierine, santonin, etc., according to the kind of parasite present, as determined by examination of the feces. As to the drink with which to take the granules, that

may be chloroform water or bromoform water, which in themselves are good anti-nauseant remedies.

There are instances in which we must guard against arresting the vomiting, namely, where the very ejecting of the offending substance from the stomach is necessary for the good of the patient.

Regurgitation differs from vomiting in that it is only a reflex into the mouth without any effort. Phlegm (*pituite*) is a mixture of saliva and mucus, and when coming from the esophagus it may bring with it some bile in a kind of a vomitive effort.

Vomiting as a reflex may appear in the course of indigestion, in hyperchlorhydria, in ulcer with very great acidity, often in peritonitis, in hepatic and nephritic colics, in appendicitis, etc. Whooping-cough and phthisis provoke vomitive cough, due to excitation of the medullar pneumogastric center. Toxic vomitings are due to uremia, to acetoneamia, and to pregnancy. Lastly, we notice nervous vomiting in meningitis, in cerebral tumors, in hysteria, in migraine, in sea-sickness, etc. Against the latter, dosimetry successfully employs its compound antinausea granules [consisting of hyoscyamine, 1-4 milligram; strychnine arsenate, 1-2 milligram; morphine hydrochloride, 1 milligram].

In infants who are subject to arthritis and to habitual constipation, and have enlarged livers, we notice a tendency to cyclic vomiting, which calls, first of all, for enemas and seidlitz at the same time, to which treatment strychnine granules might be added, and also, if need be, injections of artificial serum.

[It is especially in the course of the second period of infancy that we observe this vomiting coming on without any prodromes. The temperature does not exceed 39° C. (102.2° F.), but the pulse is much accelerated, while the breath has a pronounced odor of acetone, which latter indicates the necessity of battling against an acid diathesis by prescribing alkalis. Fatigue, excited emotions, errors of diet exaggerate intestinal spasms, and in infants they increase the activity of the pathogenic toxins of vomiting which disappear and reappear with great suddenness. There are cases, too, which we must know how to diagnosticate, in which appendicitis is evidently at the bottom of the trouble, when the treatment becomes surgical.

In nursing infants, vomiting has at all times been ascribed to overfeeding. Dr. Variot, an eminent pediatricist, demonstrated that insufficient alimentation leads to the same symptoms of gastric intolerance, producing gastric spasms. This novel idea in the matter of alimentation needs to be popularized among physicians. A too greatly reduced ration of milk or an insufficient secretion of milk in the wetnurse are causes of a certain kind of vomiting in the nursling, who has to absorb from one-sixth to one-eighth of its own weight during the first year of its life.

The vomiting of pregnancy, which is frequent and persistent, especially on rising in the morning, becomes dangerous if the emaciation passes thirty per hundred-weight and the pulse goes beyond one hundred per minute. Regulation of the diet avails nothing in this kind of vomiting. Many a woman keeps well on a fermentable and rather undigestible diet, including meats, and therefore rejects a lacto-vegetarian diet.

It is this fact particularly that argues in favor of a nervous origin of the vomiting of pregnancy and against the toxic theory. As to aliments, I frequently was successful with the coarse panade and thin purées so greatly preferred by Fochier of Lyons.

We also have to fight against constipation with granulated seidlitz, either by the mouth or in enemas. We have to recommend that digestion and even eating should

be done in the recumbent position. The use of the continuous current, the ether spray against the pit of the stomach, and massage of the pelvic colon are also excellent aids. Pinard prescribes the inhalation of oxygen, and also suggests some caution in the use of eggs.

Vomiting of pregnancy occurs ordinarily where neuropathological conditions exist. This is the reason why we so often have nervous troubles to contend with. When the vomiting continues for some length of time, then we have hallucinations, amnesia, hebétude, muttering delirium, amblyopia, strabismus, neuritis, and monoplegia. Cases were met with when by a sudden emotion, and above all when pregnancy was interrupted either spontaneously or artificially, an end was put at once to all the alarming symptoms which distinguish the woman so unfortunately from all female animals. This fact was noticed by Aristotle many centuries ago.

In some very severe cases, curative results were obtained from isolation of the patient from her usual surroundings, by the use of injections with cacodylic serum, nutritive enemas, narceine granules, Gregory's salt, cerium oxalate (Gm. 0.05 to Gm. 0.1), or by lavage of the stomach every morning. The old method of Copman, which consists in introducing a little belladonna extract into the neck of the uterus on a slight digital dilation, ought always to precede the very last resort, that of artificial abortion or delivery by means of Champetier's inflatable bags or Hegar's bougies.

Some of the simpler remedies against vomiting, such as ice, ice-cooled champagne, effervescent beverages slightly mentholized, psychotherapy, injections of cocaine at the pit of the stomach, nitroglycerin, etc., have all met with more or less success in the treatment of the troublesome vomiting of pregnancy.

Finally, we may recommend the method of Floresco of Bucharest, which will not enrich the druggist, and that is the eating of a piece of bread sprinkled with salt, designed to change the reaction of the stomach-contents and to produce a hyperchlorhydric gastric juice which will tend to

close the cardia by reflex action.—Dr. E. MONIN, in *La Dosimetrie*, 1910.

STATE OF THE MUSCLES IN TETANY

Ibrahim reported to the Gesellschaft fuer Kinderheilkunde, Munich, at its meeting on June 10, 1910, his observations made on the tetany of the sphincters, the unstriated muscles, and the heart, in nursing infants. Two children affected with tetany showed spasmodic conditions of the vesical sphincters, with severe retention of urine. In other cases he observed spasmodic action of the musculature of the iris. Koeppe noticed eclamptic spasms of the rectal musculature. The speaker believed that the sudden standstill of the heart's beating in tetany is a primary symptom which is coordinate with the spasm of the glottis and other spasms. Finkelstein saw a case of tetany with tachycardia.—*Wiener Mediz. Wochen.*, 1910, col. 2836.

PAIN AT CHANGE OF WEATHER

Pain occurring when the weather changes is a fact more generally acknowledged by the laity than by the medical profession. We hear this assertion more especially from persons suffering with arthritic rheumatism, sciatica, gout, cicatricial pains, and most commonly from persons who call their pains rheumatic. The same is true with tabetic patients, in whom sudden, lightning-like, rapid, tearing pains occur regularly as the mercury drops in the barometer, whenever bad weather sets in—rain, fog, the first snowfall, or the like. Patients with cicatrices or with amputation stumps feel it a day or two before the bad weather comes on and complain of tearing and drawing pains.

It is remarkable that the rise of the barometer or the turning of the weather from bad to pleasant is never felt by these individuals. We know that these changes of air pressure are there, because the barometer shows the fact; still, we can not make these responsible for the pains that some people feel. Whether or not certain electric forces play a part in these phenomena, as some scientists assume, has not been made

evident as yet. At any rate, we must presuppose a specially sensitive, intensive, and a quickly reacting nervous system in all those people who so promptly perceive atmospheric changes which precede atmospheric precipitations connected with a falling barometer.—*Münchener Medizinische Wochenschrift*, 1909, 804, in *Pharmazeutische Zentralhalle*, 1910, p. 1165.

DISTRIBUTION OF VASCULAR ARTERIO-SCLEROSIS

Oberndorfer made a study of arteriosclerosis in the various individual divisions of the vascular system. He found, as a rule, that those vessels which are constantly and strongly pushed out of their places during bodily movements, as for instance the vertebræ and the popliteal and external iliac arteries, are far less liable to become calcareously arteriosclerotic than the neighboring vessels which are less displaced, as for instance the internal carotid in the carotid canal and its branches in the cranium, the common iliac, the femoral and the tibial arteries.

The cause of the exemption of these vessels, he thinks, can only be the massage they get from the motion, which procures for them a better transudation of the bodily fluids and with it, as a consequence, a better nutrition of that vascular division.—*Wien. Mediz. Wochen.*, 1910, col. 2837.

INFLUENCE OF GELATIN ON BLOOD COAGULATION

J. F. Renar writes, in the *Russki Vrach* (No. 11, 1910), about the influence on the blood of Merck's sterilized gelatin, as follows:

"Gelatin increases the coagulability of the blood without exception when a sufficient quantity of it is introduced subcutaneously. No definite changes take place in the blood as to its content of salts and fibrinogen after the gelatin had been introduced. The quantity of fibrin increases steadily for some time after the injection. The white blood-corpuscles at first decrease quite perceptibly after the injection, but it frequently happens that later a noticeable hyperleukocytosis

takes place. The subcutaneous tissues absorb the gelatin quite readily. Moderate doses of gelatin are well tolerated by rabbits.

"The essential difference of opinion, with which we meet at times, about the therapeutic value of the gelatin treatment depends upon the use of unreliable, overheated preparations, and it may also result from imperfect observation."—*Wien. Med. Wochen.*, 1910, col. 2841.

TREATMENT OF HEMOPHILIA, OR HEMORRHAGIC DIATHESIS

II. Arnsperger writes as follows in the *Deutsche Medizinische Wochenschrift* (No. 24, 1910):

"Food and enjoyable articles of ingesta which stimulate the vascular system, such as alcoholics, coffee, tea, spices, must be avoided in hemophilia. Strong cathartics are to be avoided for fear of intestinal hemorrhage. Milk and a vegetable diet are considered as of favorable action on account of the calcium they contain, because this helps to activate the fibrin-ferment. The administration of calcium chloride (3 grains for each year of age), or of calcium lactate (up to 90 grains daily) during two or three days is said to increase the coagulability of the blood in three-quarters of an hour. From 5 to 7½ drams by mouth, or 4 drams by enema, continued for some time, is said to have a similar effect.

"Fresh serum, in quantities of 2 1-2 to 10 fluid drams, given intravenously for some time, is also said to have the effect of increasing the coagulability of the blood. Here, however, we run the risk of provoking serum disease. [This is a comprehensive term for the phenomena which occur after injections of a heterogenous ("artfremd") serum, such as fever, eruptions, arthritic pains, swollen glands, edema, albuminuria, etc.—Guttman's "Medizinische Terminologie."]

"In the bleeding of hemophiliacs, local elevation of the bleeding member and the application of styptics is especially necessary. In scurvy, general cleanliness is of great prophylactic importance, and so is a properly selected diet. The ingestion of fresh milk,

lemon juice, and of vegetables is therapeutically important. Tannic acid, bitters, mineral acids, and, above all, horseradish leaves, are applied by the people. In Barlow's disease of children, change of diet is indicated. In hemorrhagic purpura, rest in bed, a bland, nonirritant diet, and lemon juice are advisable. Ergot, hydrastis and lead acetate are said to act favorably. Salicylates may always be tried.

"H. Grau, in the same publication (No. 27, 1910), says that experiments on animals have shown that gelatin leads to a long-lasting higher coagulability of the blood, and that therefore its application therapeutically in bleeders seems justifiable."—*Wien. Med. Wochen.*, 1910, col. 2841.

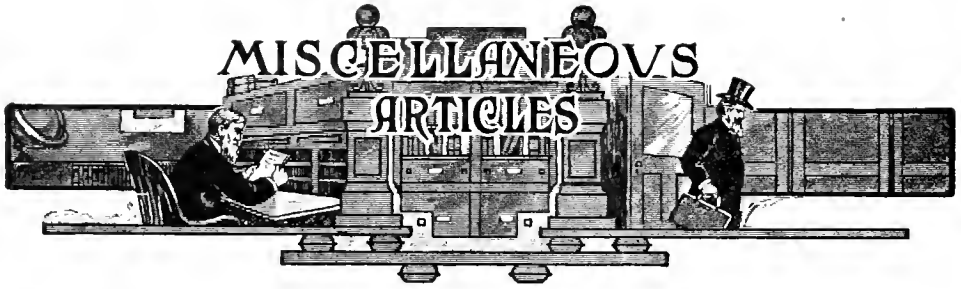
[While the value of the calcium salts, gelatin, etc., should be kept in mind, do not forget that in emergencies atropine is one of the best agents we have for hemorrhage.—ED.]

SPLenic ANEMIA OF INFANTS

S. E. Ostrowski says, in the *Russki Vrach* (No. 7, 1910), that he observed ten cases of splenic anemia in children ranging in ages from one year to two years and seven months.

In the cases of almost all of these patients, the nourishment was more often cow's milk; almost all of them had a history of diarrhea; almost all were in a state of exhaustion; in all of these children the phenomena of rickets were more or less pronounced. The spleen was enlarged in every instance, the liver in six. The peripheral lymphatic glands were palpable in some cases, but not swollen.

The term anemia pseudoleukemia infantum should be struck out from pediatric terminology as having no foundation. In the present state of our knowledge of the anemias, the designation must be "anemia splenica infantum" and the condition considered a special clinical form of disease. This disease is, in most instances, a secondary one and is caused predominantly by catarrh of the digestive tract accompanying a breaking down of strength.—*Wien. Med. Wochen.*, 1910, col. 2840.



The Doctor's Leisure Reading

With a Review of Some Interesting Books

By H. J. ACHARD, M. D., Chicago, Illinois

"NULLA DIES SINE LINEA," not a day without a line, is the motto which Dr. William Edward Fitch, the genial editor of *Gaillard's Southern Medicine*, has on his bookplate, or ex-libris, and which accompanies the armorial adorning the cover of that journal.

This motto was attributed to the painter Appelles by Pliny ("Historia Naturalis," 35—36), who did not permit a day to pass without painting at least one line, and it has come down through the years as an encouragement to writers to devote themselves constantly to their chosen field of work. It appears to me that the expression is susceptible of a wider and larger explanation or adaptation and that it may as properly (if not more so) be applied to the reading as to the writing of books.

Physicians as a rule have not much time for reading, or so they say; in fact, some physicians, and just those who need it most, do not even "have the time" to read their medical journals, which pile up, uncut, unread, in a corner of the waiting or consultation rooms, bearing witness in their dust-covered oblivion to the willingness of the doctor to do without the stimulus of medical reports and investigations, to remain stationary mentally, which inevitably means to deteriorate and eventually to become a "back number."

But it is not with the reading of medical journals and books that I am concerned today. Its necessity and advantages have

often been discussed in these columns. I would rather ease my mind of some things that I have to say on the physician's outside reading, on his general and leisure literature.

That physicians are *capable* of reading and enjoying, and also of creating other than technical literature, does not need to be pointed out. The long list of well-known physicians who not only have accumulated beautiful libraries but have themselves contributed to the world's "*belles lettres*" bears sufficient witness. Nor do I feel the necessity of adducing literary evidences by quoting men high in the estimation of their fellow physicians in support of my contention that the reading of books on various subjects serves not only for recreation but as a mental lightning rod, so to speak—as a prophylactic against onesidedness and mental limitations. The physician who, in times of leisure, cannot enjoy the writings of a Dickens, Thackeray, Eliot, Scott, Emerson and many others is in my opinion not fully developed mentally. There is a minus somewhere, a deficiency in the mental power of absorption, in the adaptability.

It is only natural that in books which we do read for recreation we are attracted by volumes which either have been written by physicians or about physicians. Of the former I need only mention those of Oliver Wendell Holmes, and of S. Weir Mitchell as instances; of the latter, Ian Maclaren's "Beside the Bonny Briar Bush." But with these authors the productivity of the pro-

fession has not been exhausted, and almost every year brings forth new books written by physicians in their leisure hours, or depicting more or less justly the lives and tasks of physicians. And aside from these there are many others which are well worth the few hours required for their perusal.

I have recently received a number of books, for review, which were either written by physicians or which are in other ways of interest, although not strictly medical reading. Some of them have been mentioned already in the book reviews.

Dr. F. E. Daniel of *The Texas Medical Journal* (Red Back) published a few years ago "The Strange Case of Dr. Bruno,"* which for strangeness, and for absorbing interest, has few equals. The book exerted an unusual fascination over me, and although it was rather fully discussed in this journal soon after its publication (1907, page 391) I feel constrained to call it again to the attention of our readers.

To the thinking physician the scientific and psychic problems discussed in the book offer a wealth of material for speculation and thought. Of particular interest to me, was the assertion made by "Dr. Bruno" that the employment of condemned criminals for scientific research should be permitted and adopted. This is by no means a new idea, but it is here unusually well supported. Dr. Bruno denies that capital punishment fulfills its purpose of deterring the vicious from crime; moreover, it is an economic waste, for not only is a producer lost to the state in the executed criminal, but all too often those dependent upon him fall to the public care and become paupers or criminals in turn.

"How much longer will an enlightened people deal with effects and ignore causes? Whose fault is it that a criminal is a criminal? Heredity, idleness, vicious environment, even less than our barbarous penitentiary methods make men criminals. The children of all vicious parents should be taken from an environment that will surely make them criminals, and taught to make an honest living, trained, in fact, for citi-

zens, and not for criminals. I mean a criminal should be prevented."

But nevertheless he continues: "Regarding the murderer and the rapist as a waste product of society, a useless and dangerous unit, something to be gotten rid of; the scum that rises to the top in the process of social evolution, the ebullition of the social and industrial cauldron, as a matter of expediency—yes; get rid of him by all means."

"But since it is claimed that no retaliation or vengeance is contemplated, but only "justice;" that the murderer and rapist had forfeited his life, why not put him to death speedily and without pain? Instead of the horrible spectacle of hanging him by the neck with a rope, or killing him by means of the no less revolting electrocution, a bungling and costly process, why not use the hypodermic syringe charged with a dram of hydrocyanic acid, which will stop the heart instantly and cause instant and painless death? Or better, *why not make use of him?*

There are many problems as yet to be studied and solved in the biological laboratory. You know there are animals whose economy does not react to certain poisons as does man's; why? The investigation of this fact, and the study of the actions of poisons on a man affords an inviting field for laboratory research.

All our studies and deductions are, and must be, on the lower animal, in comparative physiology; and some of the problems can never be worked out, unless the day shall come when an enlightened public sentiment and the law shall devote to science the condemned criminal, say the negro sadist, the black peril that casts its shadow over our fair land, more baleful than the Lethean shade of the deadly upas. Not to dissection, as people understand it, but to experimental study on the internal organs to solve the problems of immunity, fermentation and glandular action."

Dr. Bruno later experimented in suspending animation with startling results, all of which is narrated in this wonderful book.

But not only the advancement of science, and the employment, for its sake, of criminals who have forfeited their lives, interest the author. He is extremely bitter and

*Story of Love and Science, of suspended animation and life in installments; realizing Rip Van Winkle. Illustrated. Cloth and gilt. Price \$1.50. Van Boeckman-Jones Co., Austin, Tex. Second edition.

caustic in laying bare and investigating other social errors and frauds.

"Society is a sham. When a Magdalene is caught none are more forward and ready to cast the first stone than those who know that they themselves are not without sin; and they stone her because she has been found out."

And yet the yielding to one's natural inclinations is but the breaking through a very thin barrier, hardly strong enough for its purpose.

"Human nature is pretty much the same everywhere, and our civilization is but a thin veneering that covers over the animal part of man and woman. The restrictions which custom puts upon the tendency to fulfill the laws of one's nature, the indulgence of the strongest and fundamental instinct of the animal, are feeble and often broken through and disregarded. A man should enter the married state as pure in mind and body as the woman he selects to be the mother of his children."

I believe that I have given enough instances of the highly interesting questions discussed by Dr. Daniel to tempt my readers to procure and peruse it for themselves. I purposely refrain from giving an abstract of the story itself, although this is, if possible, even more striking and fascinating than are the philosophical and sociological problems which I have cited. By all means, get the book, read it and discuss it with earnest, thinking men and women. Thus the seed will work toward the development of saner or juster views of life and of social conditions.

If "Dr. Bruno" interests and attracts us by the opinions and ideas which he voices concerning the physical, physiological and biological studies required for the advancement of medical science, although he also roams in the realm of the psychical, as I have left his readers to discover, it is different with another book, written also by a physician of our own times. I refer to "The Wizard of Damavant,"* by J. Richardson Parke, who is well known, not only to the medical profession, but also to the laity, through a number of contributions to literature.

In spite of the somewhat unfortunate title, which may prejudice the serious reader, sug-

gesting as it does something in the line of the penny-dreadfuls, "The Wizard" is not only an entertaining but also a serious book, a book with a mission, a problem, which has, moreover, the uncommon peculiarity of fascinating and holding the attention of not only the grown and mature man and woman, but also the young and the children.

Dealing, as it does, with that strange and attractive period of the Crusades, which is so full of mystery, and which has left such an indelible impress upon Occidental civilization, the book, considered as a novel, offers a sufficiency of war and jousting and fighting, even including the most romantic kidnappings, to satisfy the most adventurous youngster, while for the adolescent a charming love story will serve to tide over the rougher and noisier passages.

The principal interest of the story centers undoubtedly in the psychic and occult lore which Dr. Parke has accumulated through years of study and reading and meditation. It is difficult to trace the source of all his information, as also whether he is more attracted by the Bible, the Koran, or the mystic sacred writings of the far East, especially the teachings of Gautama the Buddha, or, finally, whether he is a disciple of Madame Blavatsky. But however that may be, it is evident that the author has successfully striven to select the best from all these sacred and occult writings and that he has come to a deep understanding of the mysteries of life, of the true inwardness of things, and of the purpose for which we are on this earth—so far as man, limited physically, mentally and psychically as he is, can understand the great riddle at all.

The lesson which Dr. Parke has learned, and which he teaches as the result of his studies, is the old story of the Golden Rule and the eternal truth of the immortality and indestructibility of soul, life. The truth which he finds in all religious systems, the beauties in the Bible, the Koran, the Buddhist sacred writings, is the same in all, and his insistence upon the necessity of developing the soul is the logical outcome of his convictions.

The occult teachings of "The Wizard of Damavant" have always had a peculiar fascination for men, being told so simply and

*Professional Publishing Co., 923-925 Spruce Street, Philadelphia, Pa., 1910. Cloth, Price \$1.50.

beautifully in "The Light of Asia," which surely must be known to the author, although he does not cite it. Dr. Parke's historical investigations and reading are immense, and one wonders how long he must have followed such reading as a hobby before it could crystallize so fully and beautifully in the story he now has presented to the world.

Of still another kind is "The Captain of the Amaryllis,"* by Stoughton Cooley. Without any pretense to a mission or problem, it is just a simple love story, whose background is laid in the ever attractive and fruitful field of the South with its old-time chivalry and courteous manners. As one review says very truly, since Mark Twain's "Life on the Mississippi" no writer has portrayed this peculiar and attractive subject as well as has Mr. Cooley. As already said, the book is a simple love story, and, yet it is not without its deeper and educating influence upon the reader. This, however, I will leave to the latter to discover himself.

I have attempted to persuade the busy physician not to neglect his mind by a too-close attention to his daily grind and the exclusive devotion to literature immediately connected with his calling. Those are the best physicians, the truest helpers of the sick as of the well, who maintain and preserve their fuller and greater interest in human affairs, who remain alive, and keenly so, to the great questions which ever confront living, passionate, erring, and yet loving humanity; who understand their fellow men, not only as physical entities, but as thinking and feeling children of the Great Father. This interest can be kept alive and keen and sensitive by many things, not the least among which is the reading of good books.

BLACKWATER FEVER AND HOW I TREAT IT

My first opportunity to observe this dreaded malady I owe to the courtesy of the English doctor who alone understood the treatment of this disease in this republic, and to whose skill hundreds owe their lives.

It was in 1907, six months after my arrival, and on the 6th of April. It was about 4:30

p. m. that he was called in to consult with four native doctors, whose patient was ill, and he asked me to accompany him. When we entered the sickroom, the patient, who was a white native lady, was semiconscious and delirious, tossing on the bed. He examined her, and found she had a temperature of 106.8° F., her pulse was 130, and respirations 35 per minute. Her skin was cold and clammy, and of a deep-yellow tinge; so were her eyeballs. The tongue was coated a dark-brown, red at the tip and sides, and rough. The urine we drew off was bloody, containing about 12 percent of blood, and also was dark-brown.

The doctor took over the case and prescribed calomel and sodium bicarbonate, 10 grains of each, to be given at once, and a purge of magnesium sulphate, 1 ounce of which was to be given every hour till effect. For local application ice-bags were applied to the head and nape of neck, with cold sponging and rectal injections of cold water. Valentine's meat juice, diluted, was the food.

As the case was in the last stage and of the malignant type, and as there was not a trained nurse to be had, I volunteered to take charge of the woman for the night, as I was interested.

I first took off the upper clothing and laid her on blankets, sponged her down, and then tucked these well under. I took the temperature every hour for four hours, and carried out the treatment strictly. After I had secured copious watery stools the temperature fell, at 2.15 a. m., to 104° F., pulse to 112; respiration was 95. At 3 a. m. the temperature fell to 101° F. and she became calmer. The skin had some warmth and head and forehead were cool.

I discontinued the sponging and ice-bags, for she had fallen off into a gentle, natural sleep, which lasted until 5:30, when she awoke fully conscious, asked if she could be allowed to have a cup of tea, and inquired after the welfare of her family. Her temperature was now normal. The doctor came in and congratulated me. He prescribed Warburg's tincture, examined her and pronounced her out of danger.

Since then I have made this fever a special study, and have discovered that there are

three forms of it: the malignant, the mild, and a third, which I venture to call the aggravated form. This last form I dread.

The malignant terminates fatally in twenty-four hours or the patient recovers. The mild form lasts from three to five and six days. The aggravated form lasts eight to ten days.

The malignant and the aggravated forms in their symptoms are closely allied to yellow fever, except for the absence of the black vomit; yet I have seen cases in which, upon first appearance, the vomitus resembled that of yellow fever. The mild form can only be distinguished from bilious intermittent by the bloody urine. I may here give my method of treatment of the two last forms.

I generally prescribe calomel, but desist from any cold application, except cold enemata. I use the opposite of this. I make the temperature of the sickroom 98° F., keep the patient well under blankets, use hot fomentations to the loins, as there is never any pain present, while there is always the danger of stoppage of urine; this is usually very scanty. I encourage the free drinking of water, and administer spirit of nitrous ether, after a thorough cleaning out, and sodium phosphate and also stimulants in small doses, for the patient is always debilitated. If the case is prolonged, and of the last-named type, I pass flannel around the body, four times, from under the arms to the loins. I always feed up, for the patient needs strength to combat the disease.

I never prescribe quinine. It generally brings on relapses every three days, for if the case is well handled the urine should become free from blood in thirty-six hours. Quinine irritates the kidneys and keeps up the bloody discharge.

When there is a sign of heart trouble consequent upon the overwrought system, I give strychnine and digitalin alternately, every four to six hours as indicated. There always is attendant on this type of blackwater fever, and during the second stage, a slight paralysis of the limbs, and whenever this occurs, look out for your patient. I never lost a case.

I have not yet begun to employ the alkaloidal methods of treatment, but shall at no distant date, and shall therefore be glad to

have the suggestions of others who are experienced in their uses. My practice is very young, and in a country where the material to work upon is very scanty and among people who know little or nothing of medical skill and surgical operations.

A. M. SOLOMON

Port Limon, Costa Rica, C. A.

[We practitioners in the "States" have little opportunity to study blackwater fever, though in the southern part of our country it is still to be seen. Perhaps some of the brethren from that section will comment upon Dr. Solomon's method of treatment. We are especially interested in his advice to give no quinine. On that point physicians seem to disagree, though from the evidence at hand we are inclined to agree with the doctor—at least so far as *large* doses of quinine are concerned. In the severe forms of malaria, where the "orthodox" methods seem undesirable, excellent results have been reported from the use of the small, frequently repeated doses of quinine hydroferrocyanide. We hope Dr. Solomon will try that salt sometime, and report.

The thorough "clean-out" is surely indicated, and where the stomach is irritable the magnesium sulphate may well be given in the effervescent form. Washing out the bowel with high enemata, leaving a little salt solution behind, and antiseptics with the sulphocarbolates also seem worth while. But in this field we are tyros—we want to hear from physicians who have had experience—large experience. I am sure that Dr. Robert Gray could tell us something of extreme interest.—ED.]

CALCIUM SULPHIDE IN KOREA

CLINICAL MEDICINE is all right and I feel I need it in my business, though I can't always make things respond to the active principles as you can; nevertheless, I believe you are on the right track.

I gave calcium sulphide a good try-out a little while ago. After a month's stay in Seoul I returned to find my gateman down with pleurisy. He had been ailing nearly all the month, and I found him with his right chest nearly full of fluid. Dyspnea

was severe and he had some symptoms of sepsis. I aspirated and drew off a small quantity of fluid that, though a little cloudy, hardly appeared purulent under the use of calcium sulphide, but presently his case grew worse and I decided to open him up.



A clinic in Korea

Incision was made in the sixth interspace, in the axillary line, and a creamy pus to the amount of two quarts was discharged. The pleural cavity was not washed out. The discharge continued about four days, after which the drainage tube was removed and the patient made a good recovery and now two months afterward is in as good health as ever. Throughout his illness I exhibited calx sulphurata "to effect," and I believe it was a prominent factor in his recovery.

On the other hand, I have been using calx sulphurata both as a prophylactic and remedy in an epidemic of whooping-cough, with little if any apparent benefit, except in one case. One child, who was thoroughly exposed, passed through what appeared to be a very mild attack. The others were apparently not benefited.

I am enclosing a picture of my clinic which you will perhaps find interesting.

A. H. NORTON.

Yeng Buen, Korea.

[In a case of empyema of course the first thing to be done is to evacuate the pus. There is an old adage, "Where there is pus, there the knife," that it is always well to keep in mind. However, by the use of calcium sulphide we can often prevent the

formation of pus and arrest the suppurative process, and this makes it an especially desirable remedy, after the pus cavity has been emptied.

I hardly understand your lack of benefit with calcium sulphide in the treatment of whooping-cough. Possibly it was because you did not use it in sufficiently large doses or got hold of a drug that was not up to the standard of quality. We usually advise its use in grain doses, given every two or three hours till the secretions all smell of calcium sulphide. In addition the bowels should be kept clean and enough atropine

given to secure mild physiologic action.—
Ed.]

HINTS FROM DAILY EXPERIENCES IN SYRIA

1. To live a healthy, long life, one must live as much as possible an outdoor life.

2. Many cases of appendicitis get well permanently without the interference of the knife; so don't be in a hurry to operate.

3. In cholera infantum, no matter how bad it may be, use the following mixture after a small dose of castor oil:

Magnesium carbonate, light Gm. 4.0

Aromatic spirit of ammonia Gm. 4.0

Spirit of peppermint.....Gm. 0.2

WaterGm. 300.0

Directions: One teaspoonful every hour.

4. You will abort an asthmatic attack if you give 10 grains of caffeine citrate in one dose at the beginning of the paroxysm.

5. I think you will be well satisfied in using the following mixture for gastralgia:

Tincture of ferric chloride.Gm. 16.0

Solution of arsenic.....Gm. 4.0

Dilute hydrochloric acid...Gm. 4.0

Water, to makeGm. 300.0

Directions: One tablespoonful after meals three times a day.

6. For pleurisy, with fluid, give acid salicylic, 20 grains per dose, three times a day, and you will avoid the necessity of tapping.

7. When you have on hand a bad case of acute rheumatism, give a dose of magnesium sulphate; then follow with salicylic acid, 20 grains every two hours. You will be surprised to find your patient improving rapidly within five or six hours.

8. In treating pneumonia, you must not forget that digitalis must be used all the time, for pneumonia patients always die of heart failure.

9. Sulphur ointment is specific for scabies, or what is called itch.

10. In case of chronic cystitis, you will find boric acid in 10-grain doses to be the best.

11. The best injections for gonorrhea are corrosive sublimate solution, in the proportion of 1 in 10,000.

12. Don't forget that sciatica may be malarial. I remember two of the worst cases, where the victims could not walk without canes, and both of them were cured in a week's time with quinine and arsenic.

13. Don't forget to use calcium sulphide for pus anywhere in the body, especially for boils and gonorrhea.

AMIN I. YUSUF.

Marj'ion, Beirut, Syria.

[3. The formula advised for cholera infantum is a type of those employed before the era of the sulphocarbolates and atropine.

4. I have injected caffeine-sodium salicylate hypodermically, with brilliant success in some cases and brilliant failure in others—and this is the history of asthma. I now regard this disease as one of the remaining few examples of demoniac possession.

5. Why bother about gastralgia mixtures when two grains of iodized lime will quell the disturbance before the boy can find his hat to go to the drugstore, much less saddle the mule?

6. A good idea! Use C. P. acid. Also give a purge, a pilocarpine hypodermic, and enjoin absolute abstinence from food and drink for twenty-four hours.

7. Why waste good medicine? Give a centigram every ten minutes.

9. Try saturation with calx sulphurata instead of surface inunction, and you'll get an object lesson.

10. But—catch on to arbutin.

11. Better than injections is sulphide saturation.

12. Or back of sciatica may lurk rectal disease.

Our friend is bright and well up on the old therapeutics, even also with a look-in on the new. But few realize the rich results of the therapeutic studies that have been made here during the last dozen years, and by the followers of Burggraeve in Europe.—Ed.]

GREETING TO THE CLINIC "FAMILY" FROM ORIENTAL PERSIA

While tackling many new problems, and trying to solve them along with aggravated and aggravating old ones, how many times I wish for the counsel of my friends, Dr. Abbott and Dr. Waugh, who have so readily come to my aid whenever appealed to.

One of my new acquaintances is the "Aleppo button," or boil (*furunculus orientalis*). Nearly every one here has disfiguring scars on the face, as the result of these ulcerations. Sometimes an eyelid is distorted, or even the whole surface of the nose is one large scar. Wood (in "Handbook of the Medical Sciences") describes this condition, and says, "Nothing can be done." I don't like that kind of advice, *in any case*. So, by quizzing around, I learned that the up-to-date doctor here boldly cauterizes when the condition is seen early. This cuts short the corroding process of the ulcer, and smaller scars are the rule. I am adopting this method.

From my record-book I quote below a few cases that may interest readers of "CLINICAL MEDICINE."

On July 14, 1910, a man, 68 years, applied for relief, the case being one of acute indigestion. I prescribed bryonin, a gastric sedative, a digestive, hot applications, hot water to drink, and an enema of normal salt solution. He was relieved inside of an hour. The patient then asked me to take up his case generally.

There was a history of venereal diseases thirty years ago, he having been treated in Europe. His physicians there ordered forty-day courses of potassium iodide, and also sulphur and starch baths, which latter he continued until the time I saw him. The iodide he had dropped five years ago. His urine was scanty and had a specific gravity of 1025. My first prescription was a general diuretic, and in one week the urine was normal in quantity and had a specific gravity of 1015.

I then put him on echinacea with a digestive and as he had starch indigestion (Any wonder after those baths? Why, he looked like a mummy!), I gave him diastase, at intervals, continued until the end of the active treatment.

After arranging a ten-day course, I advised him to go up the mountains for the summer, reporting to me every week. From time to time, as indicated, I sent him hepatic stimulant, papain compound, and a general diuretic; and as he often complained of a heavy feeling in the head, mostly at night, I added atropine valerianate. Later I dropped all these remedies and kept him on the triple arsenates with nuclein until October, when he was looking twenty years younger, having lost the valetudinarian air entirely. He thinks his recovery marvelous and has sent us many new patients.

On September 2, 1910, a woman, 28 years of age, very feeble, presented herself with a troublesome case of mucous colitis, her bowels having been loose for two months, with twenty to thirty movements daily. This was my treatment: High rectal enema of soap-water followed by one of bismuth subnitrate. Also three doses of the bismuth, 10 grains each, by mouth. Then I gave correctives for diarrhea and indigestion. Diet to consist of dry starchy food. The stools lessened to six daily, but the patient still complained of much straining and burning in the rectum, and passed much mucus in stools.

September 21 I repeated the high flushing, and gave internally copper arsenite and iodoform, adding, after another attack October 13, cicutine hydrobromide. The bowels improved, but now the patient contracted malaria.

To combat the malaria, I now gave pyramidon, 6 grains during the fever, and an antimalarial when sweating began. This attack broke up inside of a week, but the woman came back October 29, looking very bad. Lips and tongue were chalky-white; she said she "fainted in her sleep." Reported much mucus in her stools.

Again I resorted to the high enema, but this time, after washing out, I injected, in two hours, 8 ounces of petroleum. The stomach was very acid. I gave manganese dioxide. This treatment was repeated for three days, when I changed from petroleum to olive oil, giving a double enema every day. Then I changed to cicutine hydrobromide, arbutin, and atropine valerianate, having looked up "Alkaloidal Practice" and come upon the fact that probably there were nervous complications.

The patient gained until December 4, when she had another bad attack, with much pain. I used one gelatin enema, which she did not bear well, passing enormous quantities of mucus for two days. I ordered her to consume gelatin twice daily, prepared in palatable form, and in desperation put her on anodyne alternating with calmative, with moderate doses of copper arsenite and silver oxide. After that she improved rapidly, and since December 22 has had no remedies.

The readers of THE CLINIC will recognize the source of authority for my procedure. I hope the case is ended, and only wish I had known enough to begin where I left off. There is no good nursing in these homes. My assistant and I had to give all the enemas.

The veiled, secluded woman! I know you are waiting to hear something about her. I have but little to say now, but, for one thing, the social condition seems to distort everything connected with the sexual relation and functions.

I came expecting simple obstetric work, but in these few months have had in my practice one decapitation, and also one cesarean section—a rachitic dwarf who had a living child delivered in this way eight years ago. This time I was called after she had been in labor two days. She was delivered in the hospital, dying of exhaustion twelve hours later.

I also encountered a case of hydramnios, with typical monster, in a primipara whom a midwife had infected in examining. I gave up my work and nursed her through a puerperal fever, injecting antistreptococcic serum and collargol prepared electrically by a Geneva (Switzerland) firm. I kept up subcutaneous injections, drop by drop of normal salt solution, for days, bracing her up during convalescence with triple arsenates with nuclein. The midwife, in this country, is under no surveillance and is a terrible menace. All the cases for curetment come to me from these women.

The child-wife, my God! how can I write of her and her wrongs! Three cases have been brought to me a few days after marriage with second-degree perineal tears. A fourth was thrown into a condition of hysterichorea, which I was able to cure in two months, by advising with other physicians on the hospital staff. We used Fowler's solution, strychnine arsenate, and the triple arsenates with nuclein.

Always with us: malaria, severe and pernicious.

Hysteria very prevalent; men and women equally affected.

"Teheran heart;" very rapid, due to the elevation, 7500 feet. Cactin, strophanthin and sparteine are most valuable as regulators.

Chromium sulphate tried in two cases of thyroid enlargement. The first patient shows the characteristic mental symptoms improving. The second patient—tumor probably weighing 60 pounds—says: "Since beginning this remedy (she has had 125 tablets) the tumor seems to have three centers, all busy working." The fibroid mass is somewhat softer. The surface blood-vessels have enlarged. The tumor presses on the heart; there is dyspnea when walking. I have added apocynin to aid in elimination by the kidneys, and cactin for the heart. I consider the case dangerous. What does the "family" suggest?

The Mussulman consults the doctor, then he goes home and selects a verse from the Koran, counts off on his rosary as many beads as there are words in the verse. Now he runs his rosary, saying: "Good, indifferent, bad," to decide whether he

shall take the ferenghi's (foreigner's) medicine.

SUSAN I. MOODY.

Teheran, Persia.

THE A. M. A. MEETING AT LOS ANGELES

It may seem a little early, but it is just as well for you to be making your plans to go to California next June to attend the A. M. A. meeting. California physicians have already begun the work of preparation, and Dr. H. Bert Ellis, Suite 245, Broadway Building, Los Angeles, will be glad to answer any questions from interested physicians.

We are promised not only the best time that California boosters know how to give us, at Los Angeles, San Francisco, and all along the line, but we are to be allowed to gather unlimited free oranges, right from the trees, will be participants in a typical Mexican barbecue at Pasadena, and will be taken to Catalina Island, twenty-five miles out at sea, where we are told we are to have an "auspicious introduction to the Pacific Ocean." (This statement requires further elucidation. What kind of an introduction, did you say?)

These are only a few of the attractions. "Come," says our California friend, Dr. Walter Lindley of the *Southern California Practitioner*, "and be happy and have a delightful memory to dwell within you the balance of your life."

TWO LETTERS: TELEPATHY, ACTIVE PRINCIPLES, EDITORIALS AND OTHER THINGS

ERIN, TENN., Jan. 12, 1911.

DEAR DOCTOR ABBOTT: Your personal letter of recent date reminded me that I really was and am "still on earth," a fact I had almost ceased to remember. It is pleasant to be reminded of interesting and important facts. And this calls to mind another thought which may or may not have a basis in fact. A day or two before the receipt of your letter the thought came to me with emphasis, "What has become of Abbott?" Personally, I had not heard from you for a long time. Was this a telepathic message flashed over a mental wireless

reaching me in advance of the written letter, or was it merely a coincidence?

Twenty-five years ago I formed an acquaintance with a somewhat elderly gentleman, who seemed to be endowed with rather more than average intelligence. Some months after our acquaintance began he moved to Colorado. We kept up a somewhat desultory correspondence for several years. After the interchange of a few letters I could tell a day or two before hand when I was going to get a letter from him. It never failed. Was this telepathy? What is telepathy? Who knows? But pshaw! the pool is too deep for me. I will leave off consideration of things metaphysical and come down to the real thing, the alkaloids. They still are IT and always will be.

The medical profession owes you an immeasurable debt of gratitude for lifting it out of the maelstrom of nihilism in which it had been floundering for a long while. The well-posted alkaloidal practitioner can now approach a sick-bed with a confidence not possible before the introduction of active-principle medication. We now know that pneumonia, typhoid fever, whooping-cough, and many other forms of sickness, can either be aborted or modified to such an extent as to deprive them of very much of their terrors.

Of this there is no doubt, notwithstanding the *ipse dixit* of some of the so-called great ones. Doctor, we love you for the work you have done on this line. It can never be too highly estimated. Its great value will be more and more appreciated as we grow to see its transcendent advantages over the rubbish of the galenic system with its antiquated methods. Your name will live when those who sought to discredit you will be forgotten.

But, Doctor, dear Doctor, don't worry us with fulsome praise for such frauds as those fakerest of all possible fakers, Post and Roosevelt! They have no conception of the coming of the era of justice and righteousness, whose bright rays of promise are even now streaming over the sunlit mountains of the eastern horizon.

The Rhodian Colossus is an infinitesimal microscopic object in comparison with the Rooseveltian Colossus, with one foot rest-

ing on the distal confines of the atmosphere of Neptune, the other on the central orb of the universe—the sun whose fires are kept eternally hot by the super-heated vaporings of this magniloquent champion of the "square deal" and other "undesirable citizens." Roosevelt and Post! and peanut shells! God save the mark and us!

Respectfully yours,

R. H. BAYLOR.

—

This is a mighty interesting letter, one which pleased us very much, though we were forced to disagree with Dr. Baylor on some points. Here is our reply:

CHICAGO, ILL., Jan. 23, 1911.

DEAR DOCTOR BAYLOR: Yours of the 12th at hand and read with pleasure. Assuredly this is another case of telepathy, very many instances of which have occurred to me. It does not seem more wonderful than the wireless would have appeared ten or twenty years ago. Doctor, if we could only put the active principles, those clean-cut, razor-sharp, finely differentiated tools into the hands of men who know how to appreciate and use them, our way would be easy. But the boy generally cuts himself first with his new knife.

I have to smile at what you say about my Roosevelt editorial. I am glad to see that it woke up some of you boys. It was high time. Read between the lines, Doctor, instead of taking the surface indications entirely.

As to Post, while I do not like all he does, and certainly cannot approve some of his methods, I do find much in the man to admire. His aggressiveness and fearlessness appeal to me because I, too, have had occasion to contend against violent opposition. Every positive man has to fight, sooner or later. And Post's foods are good, don't forget that.

I don't like that rheumatism. Look out for it. It is easier to attend to such things when they are not so bad, rather than to wait until they get too big to manage. You are just in your prime, never so well qualified to benefit your community and your profession as you are now, when the ripeness of experience has not crossed the line to decay. I hope you may be spared many

years to give good advice to the people of your community. We need men like you.

Faternally yours,

W. C. ABBOTT.

THE EVIL EFFECTS OF EXCESSIVE ALCOHOLIC INDULGENCE

I am a local optionist and in favor of total abstinence, and in writing this paper I wish it understood that I am expressing my own views on this great question of the day. As long as I can remember I have been a moderate user of alcoholic liquors, especially light wines and beers. Whisky was seldom partaken of, because I did not like the taste. I have never been under its influence, because I always knew when to stop. Unfortunately, very few know when to stop, for if they did we should not have to work, with heart and soul, to enlighten and induce men and women to let liquor alone because of its evil influences, which are too numerous to mention.

What is the remedy for those who cannot control their craving for alcohol?

Excessive alcoholic indulgence affects the person both morally and physically. The moral effects are loss of position, friendship and society, for no man who drinks to excess can hold any position of responsibility; today, in most cases, men will not be employed even if they are moderate drinkers, for fear they may some time or other take too much. Then friends forsake the moderate drinker and shun him unless they be of the same caliber. Society will close its doors to him, and he stands alone.

I personally have no use for intoxicated people; upon this I am a crank, although I take an occasional drink myself of light wine or beer, more for sociability than from any special desire for it, and if necessary I will not drink it, if I don't want it. I cannot see why others cannot do likewise, if they make up their minds to do so. They should simply make up their minds to say, "No, I will not take any."

I have been and am at the present time in association with many people whom I meet in my professional capacity, that drink to excess, who have invited me to take a

drink, and I was always able to say "No," if I so desired—even at the table of dinner parties have I gone without wine if I so desired. So, you see, it is as Emerson said: "Self-reliance and will power will overcome all evil influences if you so desire." That I am perhaps an exception I will admit, for I surely do not know many men who, like myself, can say "No."

Be this as it may, the fact is, excessive drinking of alcoholic liquors is most degrading and will put such a person in a class by himself. On the other hand, the physical effects of excessive drinking of alcohol are many, such as kidney, liver, heart, lung, eye and ear diseases, rheumatism, and all the various forms of nervous affections, and finally, insanity. If such a person be a married man, it will be the means of breaking up his home and happiness.

His wife and children will suffer, both socially and physically, and if they have to rely upon his wages for support they will finally become poverty-stricken and suffer for proper care and necessary food, with a resultant decline in health.

In many cases where the habit is constant the person will become quarrelsome, and finally reach the stage of alcoholic insanity, when he will become a dangerous man or woman to be at large, for on the slightest provocation he will commit murder, especially if he is a married man and get the delusions of marital infidelity. This is a common delusion of the alcoholic insane, and when these delusions develop you cannot get the patient under restraint any too quickly, for that is the period in which he is liable to do bodily harm to his wife and family. As before mentioned, he is a dangerous man to be at large. What an awful punishment for those so afflicted, all for the sake of drink.

The Remedy.—This question is so broad and deep that I shall not attempt to discuss it in detail, but will give my personal views as to what is best.

First of all, the various cures in the sanitariums of the land are mostly failures for the reason, as before mentioned, that if the patient has not some self-reliance and will-power, so that he will assist in the treatment, it will be a failure.

To get those afflicted to reform is a hard task. Our only hope for the future is to prevent the young people of future generations from degrading themselves by the excessive use of alcohol. The suggestions put forward for the cure of this curse of the twentieth century are many, but the only successful method of fighting this evil is to form temperance associations all through the country and to employ or get the aid of able speakers upon this subject to explain the bad results of the use of alcohol and what misery it has wrought in the world.

Also, the authorities everywhere should put up large posters upon all public buildings, steamboats, ferry boats, railway and trolley cars, informing the public of the baneful effects of alcohol upon the minds and bodies of the people, and asking them to join hands with those that are in favor of total abstinence, so as to reform those already under its influence, and above all to save the youth of our country from destruction and untimely death and disease.

It will also be necessary to have the co-operation of the press of the land, including the various popular magazines and church papers of all denominations, in printing articles against the abuse of alcohol, and telling of its harmful effects upon the human system.

This work would be a great field for those who can give large sums of money to establish institutions for the poor. Let them give it instead to fight the rum evil among our people, saving them, especially our young men and women, from the destruction caused by excesses in alcoholic beverages. Then, when the world is redeemed from the baneful and life-destroying drink habit, there will not be so much need for charitable institutions for the poor. It is a positive fact that the habit of excessive drink is the cause of more poverty than any other, for it has been proven that most of those asking aid from charitable institutions give the cause of their condition as being drunkenness in either the father, mother or brother, who, instead of giving weekly wages to those who are entitled to them for the necessities of life, spend over half of it for drink before the week is gone.

Our jails are full of criminals who can blame strong drink for their downfall in many cases, not forgetting the lunatics that are in the institutions, all due to the effects of alcohol in excess.

That the time has come for concerted action against this evil there is no doubt. I, for one, am ready to do all in my power against this evil. To start with, I am for local option in every state, so that where a majority of people want liquor they may have it, while in towns where it is not wanted the people can vote for its abolishment. This would be a beginning, and finally it would work to a full exclusion in every state of the Union. When this stage of progress is reached Congress should pass a bill prohibiting its manufacture for use as a beverage. Then, and then only, will the people be redeemed and prevented from going to destruction and degradation.

When these things are accomplished it will be a different proposition for our young men and women who contemplate matrimony, when the women can look upon their husbands and fathers with pride, in the expectation that they will be, as they should be, protectors of home and family.

How different will it all be when there is total abstinence in the family! Our children and children's children will grow up strong in mind and body. Sickness, poverty and death will be decreased, and there will be more of happiness in every household. Then the people will begin to realize that God's world is not such a bad place to dwell in after all.

How I should like to live to see in reality what a happy world it would be! May God speed the day of its accomplishment.

W. F. RADUE.

Union Hill, N. J.

THE BATTLE CREEK SANITARIUM

A few weeks ago I had an opportunity to go through the Battle Creek Sanitarium and to meet Dr. Kellogg, the head of that institution, personally. Never before have I realized what a tremendous institution this is. What impressed me most was not its bigness, though it is probably the largest of its kind in this country—possibly in any

country—but rather the thoroughness with which everything is done. The care taken to assure accuracy in the diagnosis of the cases coming there for treatment is only equalled by the painstaking persistence and thoroughness in the treatment of these patients. I got the feeling that the main object of the institution is to *cure* people, to help them as men and women to better, more rational living—and that while they are studied, they are studied with that main end in view.

Of course Battle Creek has its “fads”—it is rather noted for them—but they all have a pretty good foundation in common sense. Clean living, in mind and body; abstemiousness—especially from everything that can do harm; avoidance of excesses of all kinds, mental as well as medicinal and physical; the right use of the curative forces of nature, as expressed in light, air, water and food—these seem to be the distinguishing characteristics. In no place in the country can you see better surgery, and a large percentage of it is done with Dr. Kellogg's own hands.

Kellogg himself is a steam engine. A slight man, one of the two-meals-a-day kind—and those vegetarian—he does an amount of work that is almost beyond belief. Beside supervising this great institution, deciding its policies and methods, he sees many patients personally, operates annually upon hundreds of cases, does original medical research of a high order, manufactures food-products, writes hundreds of magazine articles and many books, and looks after business details altogether too numerous to mention. Having no children of their own he and his good wife have adopted and provided for about thirty young people. He teaches in a medical school, one whose main object is to prepare young men and women for service on the foreign missionary field. I consider Kellogg one of our *great* medical men.

While the use of medicine is not one of the distinguishing features of the Battle Creek sanitarium I find that it is not absolutely despised and rejected, as so many seem to think. Kellogg is open to conviction. I wish, however, that his fine mind might be concentrated more upon the possi-

bilities of medicinal therapy; if it were, I am sure it would mean great things for our profession.

Finally, let me advise any member of the “family” who may be near Battle Creek to drop into the Sanitarium and see something of the work that it is doing.

DOES CALCIUM SULPHIDE PROTECT?

I wish to report an interesting experience, bearing upon the question as to whether saturation with calcium sulphide will protect against contagious disease.

Marguerite E., age seven years, came under my care on March 7, 1910, for pertussis. Calcium sulphide gave good results—as it has done in many cases of pertussis in my practice.

On April 22, 1910, the child contracted measles, although she had taken calcium sulphide throughout March and April. Calcium sulphide did not protect her against measles, which is in line with some previous experiences of the same kind.

The attack of measles was a severe one and the accompanying bronchopneumonia stirred up a paroxysmal cough so that we continued calcium sulphide throughout April, May and into June.

On June 21, 1910, her sister came down with scarlet fever, which ran a mild course. Marguerite remained with her sister during the entire period, taking calcium sulphide daily, and did not contract the scarlet fever. Early in July we discontinued the calcium sulphide.

On Nov. 15, 1910, Marguerite took sick with a very severe attack of scarlet fever. (Many cases were being reported from the same school at this time.)

Question: Did the fact that she was saturated with calcium sulphide at the time her sister had scarlet fever in June protect her, and did she, who had previously shown herself so susceptible to pertussis, measles, parotitis, varicella, and in November to scarlet fever, contract the latter because she had been for fully four months without calcium sulphide?

Looks as though the calcium sulphide protected her in June against scarlet-fever and failed to protect her in April against measles. I have had other similarly varying

experiences and have not come to any positive conclusion on the point.

Just had another interesting experience. A young lady of twenty two, in an advanced stage of tuberculosis, was temporarily making her home with a family, in which from September 14, 1910, to October 14, 1910, I had two cases of scarlet fever. Although exposed daily she escaped scarlet fever. She entered the city tuberculosis sanatorium on October 18, 1910, and left November 21, 1910, to go to her sister's home at Monroe, Michigan. On arriving there she found her sister's children sick with scarlet fever. She entered the house, remained there, and in a week she was sick herself with scarlet fever and had it good and hard.

My records show that during her stay with my scarlet-fever cases in September and October, she was given by me the sulphocarbolates for a severe autotoxemia, and calcium sulphide, with other remedies, for her septic condition. This seems to be a very plain case of protection against scarlet fever by calcium sulphide and general antiseptic treatment.

Scarlet fever has been with us for eight consecutive months and I never have seen so many cases accompanied by rheumatic arthritis and endocarditis.

I report the above as it may aid in the solution of this interesting question.

THEO. SCHMALZRIEDT.

Detroit, Mich.

[This is an interesting report—and, by the way, calcium sulphide is an interesting remedy. A doctor from Mexico wrote us, not long ago, asking (in a rather facetious way), if there was *any* disease that it would not cure. We admitted that there were a few; but we also stated, as we thoroughly believe, that there are very few remedies which have such a wide range of usefulness as this one. The only reason why it is not used more is because so many physicians have not taken the time or trouble to familiarize themselves with the possibilities of good samples of the drug.

Why cannot we have some reports of experience with calcium sulphide, in the treatment of the contagious and other dis-

eases? Every reader of CLINICAL MEDICINE is invited to tell us what he knows about it, and relate his experience with cases in which it has been used. We should get many short, right-to-the-point articles. Please, Doctor, send in *your* report.—ED.]

SPEAKING OF DIGITALIS SUBSTITUTES

Our good friend Saunders, of the Hoffman-La Roche Chemical Works, calls us to task because, in enumerating the various substitutes for digitalin, some two or three months ago, we failed to mention digalen. The point is well taken, for digalen is certainly a reliable product, one that has the characteristic digitalis action, and like other true active principles it has the virtues of uniformity of dosage, concentration and dependability in action.

Digalen is the soluble digitoxin of Cloetta, and is marketed in solution only. Digitoxin, as our readers know, as extracted from digitalis leaves, is exceedingly insoluble, and very slow in action. According to most authorities its solubility is increased by the presence of digitonin—but the amount of this substance in the leaf is inconsequential. At any rate it is probably true that digitoxin more nearly represents digitalis than any other one of the glucosides contained in the plant. The problem was to activate it, bring it to a point where it would act at once rather than after an interval of hours or days, and this apparently has been accomplished in digalen.

Digalen is said by *The New Mexico Medical Journal* to be well suited to intravenous use, and it is recommended that it be given more largely in this way, in which it is said to be "the ideal digitalis medication in the tuberculous (myocarditis and endocarditis) where often extra systole is observed. In these cases we must avoid to burden the already defaulting digestive tractus."

THE TREATMENT OF GRIP

In discussing the grip it is neither instructive nor interesting to the medical man to peruse a lengthy dissertation upon etiology,

symptomatology diagnosis, etc. As to its causative factor, as well as its contagiousness, we are agreed; and just as asthenia is an important factor in other diseases, it is also here; an age- or disease-depreciated vitality renders the body more vulnerable and renders complications more likely of occurrence and more serious of import.

While the textbooks recite a variety of forms of the disease, such as the respiratory, gastrointestinal, cardiac, typhoid and rheumatoid types, and while we observe how slipshod diagnosticians make this disease the scapegoat of almost every other disease by calling them "a touch of the grip" (God save the mark!) still grip is a disease which, despite its many types, has its characteristic

patient an easy prey to recurrence or complications, if rest be not taken.

Elimination is important and therefore food had better be taboo for the first twenty-four hours, and the amount of liquids ingested reduced to a minimum for the same period.

On general principles, fresh air is of importance and especially so on account of the usually attendant respiratory features; and water or medicated vapors are always of benefit, as is the attention to the nasopharynx with mild alkaline solutions.

Sponging with an aqueous epsom-salt solution (4 drams to the pint) is also of value, and often much comfort is secured by applying the hot-water bottle to some painful spot.

The medicinal treatment employed for years has seemed as nearly specific as one can well apply such a term to therapeutic applications. As it is not based on drugs of anodyne and waste-blocking nature, but on eliminants, it may well be said to be curative in the true sense.

The clean-out by small repeated doses of calomel, or calomel with podophyllin, is to be completed with a dose of saline laxative, or, better, salithia, in not too large a quantity of water.

Frequently I give one or two small doses of calbromalid for immediate relief or until other medicines get control of the situation. The dominant treatment is always something like the following combination in solution: Aconitine, gr. 1-134, 24 granules; bryonin, gr. 1-67, 24 granules; hyoscyamine, gr. 1-250, 24 granules; macrotin, gr. 1-12, 12 granules; colchicine, gr. 1-134, 8 granules; water, to make 3 ounces. Directions: One teaspoonful every hour until symptoms subside; less often thereafter for a day or so, as indicated.

It is needless to go into the rationale of the application of each of these ingredients, since each is there to meet its proven therapeutic application. To the above combination strychnine arsenate is often added, and in case of excessive cough, half a grain of heroin. Renal or cystic conditions may



Dr. Hubbard in his office

ear-marks and the aggregation of symptoms unite to depict a clean-cut picture, and diagnosis is easy.

There is little doubt that dyscrasia and diathesis determine the type the disease assumes in each case, just as the exposure to cold or dampness results in tonsillitis, bronchitis, neuralgia, myalgia, pharyngitis, rheumatism, etc., in different individuals. The prognosis under good management is almost uniformly good.

Of importance in the general management are rest, fresh air and nutrition. Rest in bed, for at least a couple of days, is important in all cases. While relief of the subjective symptoms soon follows well directed therapeutic measures, the profound nerve-racking depression attendant renders the

make arbutin a valuable addition. Emetin, apomorphine, lobelin and sanguinarine may all be indicated additions at times, and quite often gelseminine.

In those cases where nausea and vomiting are prominent features, I give 8- or 10-grain doses every hour or two, of a powder containing equal parts of lactopeptine, bismuth subnitrate and cerium oxalate, and this is enhanced by the patients taking sips of hot water, and applying counterirritation to the epigastrium by a mustard paste or dry heat.

The following solution is rarely ever left out and is usually begun after the saline dose that follows calomel and podophyllin; and it is continued until the cough is gone:

Calcidin, grs. 8; water, 3 ounces. Directions: One teaspoonful every two hours.

I always leave a quantity of the arsenates of iron, quinine and strychnine, with nuclein, to be taken after meals and at bedtime, to hasten recuperation.

For quinine I have little use, and as to calcium sulphide, which I have seen much recommended, though much devoted to that drug in a variety of diseases, I can see little use for it here. In the first place the stomach is not very tolerant to begin with, and later there seems little indication for it. The treatment outlined puts an end to the disease in a very few hours.

O. W. HUBBARD.

Batavia, Ill.

TYPHOID FEVER AND PNEUMONIA: REFLECTIONS OF A VETERAN

It is not because I am a better physician than others that I wish to write and speak on this subject, but I have practised medicine for almost sixty years, and am now nearly ready for the retired list. In that long period of work, I have gathered a few facts that I wish to leave with the profession.

For the first thirty years I was a strict regular. Homeopathy was to me foolishness, and eclecticism a stumbling block. I stuck to the old reliable school; but I soon learned that no system was perfect; that medicines did not cure *all* the sick; that very many patients died, in spite of all our doctors; and I got tired of being responsible for the death of my sick ones, and began to wish

I could get into some other vocation. But I seemed to be tied down to this one.

After about thirty years some of Burggraeve's journals were accidentally thrown into my hands, I was surprised at the results claimed and said to myself: "Are these things possible?" and then I subscribed for his (Burggraeve's) journal and took it until Dr. Abbott started THE ALKALOIDAL CLINIC. I soon began to call this the best and most practical medical journal that came to my office, and I have not had reason to change my mind yet.

Dr. Abbott started in weakness but he has gathered power. Read carefully his journals and you will become medically wise.

I said that many of my patients died in my old practice, and it was so. Typhoid fever was the most common and dreadful disease of my early years. I did not know how to cure it and I called on the old doctors for help, and they seemed to be as helpless as myself. Our patients lived four, six, eight or ten weeks, and got well or died. The doctors seemed to know nothing about the cause of the fever. I began to look about for the cause and I found that invariably where we had this fever we had bad water. I put our people to cleaning out their wells and kept at it, till now it is a very rare thing for us to have a typical case of typhoid fever in our community, and we very seldom have the long lingering form.

I have said that with our present knowledge and with the alkaloidal treatment a physician should have the good excuse of a complication if he does not have his typhoid-fever patient on his feet at the end of the third week. But we will have complications; we will have a bad nurse occasionally, or the patient will disobey orders; something will occur to cause a lingering and sometimes a dying patient.

About ten years ago, when I was in very active practice, we had two bad wells that poisoned two neighborhoods. In this epidemic I had about twenty patients down with typhoid fever, and nearly all of them were on their feet at the end of the third week. I lost but one patient, but I did not treat him for the reason that I could not. He would conform to no rules and he died at the end of the first week, unnecessarily.

Two of my nurses were taken down. One went to Newhalley and the other to Chilli-cothe. Both died about the fourth week. But for this somebody might have said that my patients did not have typhoid fever, but their cases settled the type. Somebody may ask: "How did you treat them?" I treated them alkaloidally—of which I will speak in the future.

As the season is now here for pneumonia, I will speak more particularly of that malady. It is a disease of very great mortality. A very large percentage of our people, especially our old people and our drunkards, die of pneumonia. It is chiefly a winter disease. Our old and some of our new writers tell us that it is an incurable disease, and that we should make no special effort to abort or cure it. I think that I have most positively proved this statement to be absolutely false, and the man who makes the above statement is ignorant of the present alkaloidal practice. For several years past we have had but little pneumonia in this locality, but for two years (six and seven years ago) I treated twenty cases without a death and nearly all were cut short within four days and ready to get well.

This is a strong statement, somebody may say. So it is, but let me give you a fact or two. I was told by one of our physicians that I could not cure pneumonia in four days, that these cases were not pneumonia. About three days after this assertion was made I had a very severe case of pneumonia, the character of which no one could doubt. I had such confidence in my ability to cut it short that I determined to make this case an example. I placed a newspaper on the floor near the patient's bed, and directed him to spit on to this paper. The next evening the paper was covered with blood and mucus. I exhibited this to three men on the road to my office; one of them was a doctor, another a druggist.

Unrolling the paper I said, to the doctor: "What is the matter with this fellow out here who is spitting such stuff?"

"Oh, you have got it now."

"I wanted somebody to know that I have a case of pneumonia," I replied. "You think this is an honest case?"

"I do," he said.

"Well, Doctor, I am going to make an honest effort, by the help of Providence, a good nurse, and the use of the alkaloids, to give this man to his wife to nurse and feed on the fourth day. He has had one day's treatment. Friday evening I shall bring you his temperature."

On Friday evening I called the doctor again to my buggy and showed him the thermometer at the normal point. The patient had no fever, the lungs were clearing up and he wanted something to eat. I had handed him over to his wife to feed and nurse. I did not directly visit that man again, and just one week from that time he went to the field to drop corn and actually drove the dropper three rounds. His father, who was a "French Dutchman", came with a hand to plant his corn. He said: "Gus, you gets off that dropper. I brings a hand to drop your corn."

"Well," said Gus, "I have got in three rounds anyhow," and went to the house.

Here's another case. Miss H. took a chill on Thursday with a high fever. She doctored her "cold," as she called it, until Monday, when I was called and found her with pneumonia. I visited her three days, missed one day, and made the fourth visit on the fifth day. I found her safely recovering and dismissed the case to the nurse. I treated her alkaloidally.

A boy, ten years old, a foreign boy. The whole family were sick with grip, under another doctor. I refused to take the case. He was so nearly dead that I thought I should not be able to help him. The father insisted that I take the case; said that he wanted me in the first place, but by mistake he got the other doctor, and I finally consented. I made him three visits, missed a day and made the fourth visit. I found him safely convalescent and dismissed the case to the nurse. I treated him alkaloidally.

These were among my worst cases. Two of them show positively that some cases can be jugulated after the disease has had several days' progress.

You will expect me to say a few words about my method of treatment, but it seems almost superfluous. Enough for me to say that I treat these cases alkaloidally.

The alkaloidal rule is to use "the smallest possible" doses of the active principles of plants to cure the disease; and always be sure to use enough medicine to do the work. A husky athlete will often require twice the amount of medicine a delicate patient will need. There is room for the display of wonderful skill in combining the alkaloids to jugulate an acute disease quickly.

The method with pneumonia that has given me the best results is as follows: First, "Clean out, clean up and keep clean." Often, very often, the first thing I do is to give 1-4 grain of morphine hypodermically, if there is much restlessness or pleuritic pain; then I clean out with calomel and podophyllin. I give 1-2 grain of calomel every two hours till two grains are taken. With the last two doses of calomel I give two granules of podophyllin, 1-4 grain. If evacuations are not active in two hours I give a full dose of saline laxative, a tablespoonful, and repeat it every three hours if necessary till a thorough action has been secured. If necessary, in twenty-four or forty-eight hours I give a little calomel again. I avoid morphine after the first dose, quieting the patient with hyoscyamine almost entirely.

After you get a good physic prepare and give promptly your defervescent alkaloids as follows: Aconitine, gr. 1-134, twenty-four granules; digitalin, gr. 1-67, twenty-four; strychnine arsenate, gr. 1-134, twenty-four; hyoscyamine, gr. 1-250, twelve to twenty-four granules. Dissolve all in twenty-four teaspoonfuls of water and direct the nurse to give one teaspoonful every twenty-five minutes till six doses shall have been given, then one every half hour for six doses more, then one every hour till you see the patient the next day. After this prescribe them as you think the case needs it. This routine must of course be varied according to age, weight, strength and reaction to the remedies. On the third day the patient may not need the dose oftener than every two hours, if the temperature and pulse have become almost normal. On the fourth day a dose every three or four hours suffices, but continue this prescription three or four times a day until the patient is decidedly convalescent. Dilate the pupils with the hyos-

cyamine, then watch it carefully and let up. After the second day patients do not usually need much hyoscyamine.

If the fever does not yield promptly give two doses 4 to 6 grains each of zomakyne (a proprietary acetanilid mixture), one at 2 or 3 p. m. and one at 5 or 6 p. m., for two or three days. All this time see that the bowels are kept clean by a little calomel and podophyllin, and use an intestinal antiseptic—none better than the compound sulphocarbolates. If no other antiseptic is handy, fill a bottle one-quarter full of listerine and fill it up with water, and give one tablespoonful three or four times a day right along. Have the nurse be careful to give the patient a few swallows of water always after giving the prescription containing the aconitine. Use some protective over the lungs.

With a nurse who is quick and understands her business you will usually find the patient decidedly better on the third or fourth day.

Old people and drunkards will not die on this treatment, as they will under the old method. Let me protest against the almost universal custom of giving drunkards whisky when sick. In pneumonia nearly everyone will die if alcohol is given.

This is my farewell address. I may never meet you again, but if my paper has led any young physician to study the alkaloidal treatment of acute diseases I am well paid.

J. M. EVANS.

Clarksburg, O.

[We have held Dr. Evans' exceedingly interesting paper for some little time, since it has seemed to us that now, in mid-winter, when there are so many cases of pneumonia to treat, the time is most ripe for its appearance. Such a paper can not be lightly scoffed at. From beginning to end it breathes sincerity—sincerity backed by long experience. When a man who has become discouraged and disgusted with medical practice finds something that changes his whole attitude regarding the treatment of disease, this is a phenomenon worth investigating; the new methods deserve the study and at least the experimental application of thoughtful men.]

Of course every doctor, even if he does use the alkaloids, isn't going to cure all his cases of pneumonia or typhoid fever. It would be foolish for us to minimize their importance or their danger. But he can improve, and vastly improve, his methods of treatment, and in so doing save very many that would otherwise die.

While the good doctor has many, many years to his credit, we hope that he may be spared to us many years to come, and that the "family" may soon have again the benefit of his ripened experience.—ED.]

BRONCHIAL ASTHMA AND ITS SUCCESSFUL TREATMENT

Dr. F. A. Southwick of Stevens Point, Wisconsin, says that bronchial asthma is a paroxysmal dyspnea followed by a bronchial inflammation, depending upon three factors:

1. The irritant itself, which may be either within or without the body, such as uric acid or the purin bodies in the former contingency, or hypertrophic rhinitis, due to dust and pollen in the latter.

2. The hypersensitive mucous membrane which receives the impression from the irritant, and which may be that of the nose, throat, bronchi or the gastrointestinal tract.

3. A depraved and perverted nervous system through which the abnormally sensitive vagus-center transmits the irritating impression to the muscular fibers of the bronchial mucosa, causing them to contract spasmodically, and thus producing the paroxysm.

A coexistence of all three of these causative factors is required to produce asthma. The indicated treatment, then, is plainly to be looked for in three directions:

1. To remove oneself from the source of irritation.

2. To remove, from oneself, the source of irritation.

3. To build up and transform the nervous system into a healthy state.

All the different principles of treatment which have been recommended for asthma by the many different writers, can easily be brought under one or the other of these three divisions. Unfortunately, and as South-

wick believes, wrongly, not much encouragement is afforded in literature for attempting an actual cure of chronic cases, and physicians have, as a rule, been content to give temporary relief to the paroxysmal attacks.

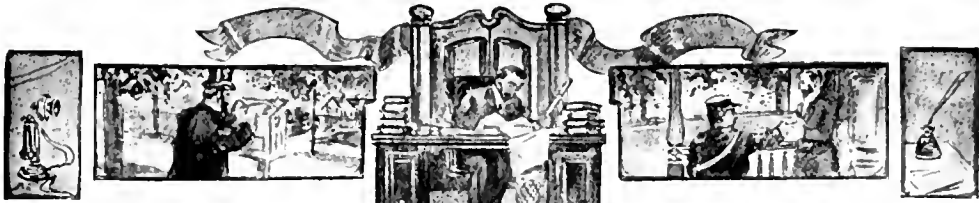
He describes a formula which he has used with great satisfaction during the last twenty years, in over one hundred cases in which he was able to effect a complete, or at least a practical, cure in a considerable proportion of cases. This formula is that composing the *tinctura helianthus composita*, as he calls it.

The remedy is compounded from sunflower seeds, Virginia snakeroot and lobelia, in a menstruum of spirit of juniper, and to these ingredients are added 2 grains of potassium iodide per fluid dram and 1-64 grain of strychnine arsenate.

On account of the eliminating properties of this preparation, it is helpful in removing the acidemia, which, without doubt, is a frequent primary cause of asthma; through its alterative and expectorant properties, it relieves or removes the bronchitis, which is perhaps the most important factor we have to deal with in the chronic cases; finally, through its stimulating and tonic properties, it builds up the nervous system, so that the perceptive centers take less notice of, or disregard harmful impressions.

In some cases, before complete and satisfactory lasting relief could be obtained, Southwick found it necessary to have abnormal conditions in the nose and nasopharynx corrected, and in other cases to correct an existing dyspepsia or a tendency to overindulgence in food. Of course it becomes necessary in many cases to build up and improve the perverted tone of the nervous system with tonics and this the author does by supplementing the treatment mentioned with codliver oil, hypophosphites, iron or arsenic.

Southwick claims that hay-fever requires practically the same treatment as does bronchial asthma, and as a matter of fact he has found the tincture of *helianthus comp.* to be an excellent preventive remedy if begun prior to the attack and given throughout the full period of susceptibility.



CLINICAL · MEDICINE POST-GRADUATE · SCHOOL OF THERAPEUTICS

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PART III.—LESSON EIGHTEEN

DISEASES OF THE LIVER

TREATMENT OF CONGESTION OF THE LIVER

The Diet, in acute congestion of the liver, is of great importance. Highly seasoned foods, alcohol, pickles, sweets, are to be avoided, and meat should be eaten in moderation. Bread and vegetables rich in starch should also be consumed in moderate quantities. Buttermilk, skimmed milk, eggs in moderation, fish, the white meat of chicken and turkey, green vegetables, and tomatoes are appropriate articles of food. Fruits naturally very indigestible may be partaken of, while lemons seem to be of decided benefit in some cases.

Many of these cases of acute congestion of the liver are due to errors of diet, and it is always necessary to correct them. When the attack is marked by mild symptoms, only some very slight modifications of habits may suffice to effect a cure. But in any case, it is advisable to insist upon a somewhat sparing diet, such as here indicated.

Unless the case is a severe one, it is not necessary to interfere with the ordinary occupation of the individual, except when the same entails much worry or leads to undue haste at meals. Ordinarily the trouble is not severe enough to send the patient to bed, although it is commonly found that a

moderation of the ordinary amount of exercise is beneficial.

Mineral Springs for Recurrent Attacks.—Recently one or other of the mineral waters has been recommended, and in cases of reoccurring acute congestion, much benefit may be derived from a short course at one of the continental "bads." The benefit thus obtained is by no means solely dependent upon the nature of the mineral water, although to some extent the laxative action is advantageous. A large element in such cures lies in the enforced detachment from business worry, in the relative idleness entailed, and in the strict regulation of diet commonly enforced.

Evacuation of the Stomach.—In view of the fact that substances formed in the stomach and bowels by changes in the food tend to cause or keep up the hepatic congestion, these substances should be removed.

The old plan of giving an *emetic* in such cases has gone out of vogue in a great measure, nevertheless such treatment often brings about prompt and decided relief. *Lavage* may be practised with benefit, not only in cases in which there is dilatation of the stomach, but whenever there is protracted gastric disturbance. This procedure is rarely necessary, however, as relief can

usually be obtained by less unpleasant methods.

Febrile Complications.—If the congestion is marked by febrile symptoms, it may be necessary, and usually it will be, to advise a few days of rest in bed. During the time spent in bed, effervescent saline laxatives should be employed, sufficient to keep the bowels freely open.

If there is much complaint of *pain in the region of the liver*, or much tenderness, relief may be obtained from the use of leeches or hot fomentations. When congestion is due to exposure to cold, similar treatment may be adopted.

Still, frequently, in the absence of febrile symptoms, patients will be found to rebel against the enforced inactivity, and many cases of hepatic congestion from chill will run a mild course without needing any great interference with the patient's ordinary habits. The duration of the attack will be shortened by rest in bed, while the likelihood of development of other symptoms is simultaneously diminished.

Cathartics, Cholagoges, and Intestinal Antisepsis.—The bowels should be kept open by means of calomel in divided doses, or by calomel and podophyllin, followed by saline laxatives. After the bowels have been freely moved by the foregoing, some of the vegetable cholagoges, such as leptandrin, euonymin, iridin, combined with strychnine, may be added to one or more of these agents with advantage.

Cathartics which stimulate peristalsis are valuable, as it is necessary that the contents of the intestines be hurried onward without allowing time for the absorption of liquids; and the amount of fluid in the portal system should, to a certain extent, be controlled.

How to Give Saline Laxatives.—When giving saline laxatives, give them in concentrated solution. It is now known that most saline purgatives tend to form a solution of six percent concentration within a short time after they have been administered. Hence, if given with a greater proportion of water, some of this fluid will be absorbed. On the other hand, if the solution is in a more concentrated form, the salt tends to abstract water from the intestinal vessels, thus reducing the liability to

portal congestion. When, however, salines are given in concentrated form, their action is somewhat slower than when freely diluted.

Fermentation and Flatulency.—To correct the fermentation in the stomach and bowels, and the flatulence occasioned thereby, hydrochloric acid is useful, and it is probable that its value in hepatic diseases is due chiefly to this influence upon gastric digestion, its action thus being indirect and secondary. When there is much intestinal flatulence, nothing is equal to the sulphocarbolates freely administered. The sulphocarbolates in combination with the bile-acid salts act even better.

Malarial Cases.—In cases due to malaria, quinine, of course (or its arsenical combinations, the arsenate of quinine), is a drug that is of most value. Along with the quinine, or, perhaps, after it has been given for ten or fifteen days, iron should be given for its tonic effect. The arsenates of iron and quinine will be found of great value.

Sometimes I have seen excellent results from the use of mercuric chloride (in guarded doses), given with some preparation of cinchona. The antimalarial combination of Dumas also is of great value here; this consisting of strychnine arsenate, gr. 1-250; quinine arsenate, gr. 1-134; iron arsenate, gr. 1-12; quinine hydroferrocyanide, gr. 1-6; capsicum, gr. 1-67. A dose this size may be given every two hours until a feeling of stimulation is experienced, when one three or four times a day will be all that is necessary.

Local Treatment.—For the tenderness and pain in the hepatic region, hot fomentations over the right hypochondrium are very useful; or mustard poultices or turpentine stupes may be employed.

In protracted cases, painting the surface with tincture of iodine, or rubbing it with oil of turpentine once or twice a day, will be found advantageous. Dry-cups will sometimes give relief; and a strong solution of ammonium chloride, or fomentations acidulated with hydrochloric acid may be applied over the region of the liver. All of these act well in relieving the pain and the congestion.

Accompanying *headache* may occasionally require relief. Some simple remedy, like

potassium bromide or a compound acetanilid tablet, will usually suffice.

Chronic Liver Congestion.—When an attack of congestion of the liver tends to become chronic, some modifications of the course of treatment will be advisable, although these modifications are comparatively slight.

The chief alterations is in the amount of exercise that is to be taken. Certain forms of chronic hepatic congestion derive benefit from active exercise, while in acute congestion, greater improvement usually follows rest.

Active and Passive Exercise.—The exercise must be adapted to the age and to the circumstances of the individual, and to some extent it must depend upon his general physique. For patients who are abnormally stout, gradually increasing walking exercise will give the best results, as the breathing power improves. When, however, circumstances permit, riding is preferable, since during the necessary active movements of the body the circulation in the viscera is facilitated and the tendency to constipation is diminished.

Many patients with chronic congestion of the liver derive benefit from *massage* and the use of *baths*, a douche applied over the region of the liver is of great service, and often even more beneficial is the alternation of heat and cold. Frequently, in addition to the value of the baths, benefit will follow a course of treatment at a hydropathic establishment, where the modifications of diet and the use of waters with mild purgative properties have considerable influence over the hepatic influence.

Should the circumstances of the patient not permit the adoption of these measures, it will be necessary for him to attend closely to the action of the bowels and to favor slight laxative action by the employment of some mild saline purgatives like the effervescent saline laxative (preferably taken in the morning), or the occasional use of a pill of calomel, podophyllin and bilein.

Patients with chronic congestion demand the same precaution with regard to diet as have already been indicated for acute congestion, though it is rarely necessary to insist upon their being restricted to liquid diet.

Passive Hyperemia.—The indications for treatment of passive hyperemia of the liver

are: first, to remove the causes of the condition as far as this is possible; second, to relieve the symptoms; third, to correct evil results.

In many advanced cases of pulmonary or cardiac disease, it is impossible to remove the cause entirely, but much may be done even in the worst cases to check the process of the morbid changes in the liver, and to postpone the advent of dangerous symptoms.

In nearly all instances of cardiac trouble, digitalin is a drug to be relied on. It strengthens the action of the heart, constricts the blood-vessels, and acts as a diuretic. Other cardiac stimulants, such as strophanthin, convallamarin, and sparteine, may be given in place of digitalin, but they are much less satisfactory. Strychnine and iron may usually be combined with advantage, and after the immediate symptoms are relieved, the digitalin may be discontinued, and the triple arsenates of iron, quinine and strychnine given instead.

To lessen the engorgement of the liver, saline aperients are very useful. A full dose of effervescent saline laxative in hot water, taken before breakfast, will cause free purgation and very marked diminution of the swelling of the liver. Bleeding of any form is usually inexpedient, at least so far as relief of the hepatic troubles is concerned.

Hemorrhoids generally are relieved by purgatives, and of these the effervescent saline laxatives usually answer best. If they are a source of much pain, the local application of some soothing ointment will alleviate the distress.

Treatment of Jaundice.—The first essential in the treatment of jaundice is to ascertain the cause. To some extent this may be indicated by the nature of the associated symptoms, and more particularly by the rapidity with which the yellow suffusion occurs after severe pain in the region of the gall-bladder.

With the ordinary obstructive form of jaundice due to catarrh of the bile-passages, although complaint of pain may be made, the pain is not nearly so severe as with the passage of gallstones: indeed, it may consist more of discomfort and perhaps tenderness over the region of the liver, than of actual pain. Owing to the severity of the

attack of biliary colic, the patient is confined to his bed from the commencement, while with obstructive jaundice it is mostly so slight that he may pursue his ordinary vocation.

The Gastric Conditions.—With cases of obstruction which are not the result of gallstones, the first symptoms to claim attention will be those of gastric catarrh which are so frequently the prelude to jaundice. These symptoms may be dealt with by partly modifying the diet and partly by gastric sedatives.

The diet should be light and nutritious, but not necessarily consisting of liquids, though from the severity of the catarrh the patient will commonly express a preference for liquid diet, or at least for a diet containing no meat or fat. Weak tea, dried toast and other farinaceous food will generally tend to allay symptoms of gastric catarrh. At the same time preparations of bismuth and diluted hydrocyanic acid may be prescribed for their sedative effects.

As gastric catarrh is commonly associated with constipation, it is advisable to begin the treatment with small doses of calomel, followed by effervescent saline laxative. This latter preparation may be repeated on alternate mornings, or oftener if necessary, during the continuance of the jaundice. It is not wise in these cases of catarrhal jaundice to give the more active purgatives. There appears to be no advantage in causing frequent and copious action of the bowels. Since in cases of jaundice the appetite so commonly fails early in the disease, no benefit can result from frequent purgation, while, moreover, purgatives might only tend to increase the irritation which probably already is present in the stomach and intestines.

The acid wines and also lemonade may be used in moderation, but alkaline drinks are decidedly preferable because they render the bile more liquid and probably increase the amount.

I find that a combination of sodium sulphate with an alkali and sulphocarbolates acts beautifully in these cases, and that it helps to increase the flow of bile, to relieve the congestive condition of the mucous membrane of the duodenum, and tends to force the plug of mucus, when

one is present, out of the opening of the common bile-duct.

Krull has advocated the use of rectal injections of cold water for catarrhal jaundice and claims great benefit from this procedure. He employs one or two quarts of water of a temperature of 60° or 70° F., introduced into the bowel by means of an irrigator or fountain-syringe once a day. He states that after this treatment the feces become brown in four or five days, and that the jaundice promptly disappears. Other practitioners have reported good results from the same mode of treatment.

The bitter tonics are also very useful in these cases, for example, quassin and strychnine. The use of hydrochloric acid externally has been advocated, but I have found it of very little value.

GEORGE F. BUTLER.

HEPATIC SLUGGISHNESS AND JAUNDICE

Time was when the doctor referred anything below the diaphragm to the debit of the liver; and the general view held of this unpopular organ was so low that there was no charge so base but what it was at once accepted as true, without the slightest testimony being tendered or asked. Recently this view has been deserted, and we are at last beginning to realize the inestimable services rendered to the body by this great glandular Cerberus, and that when it is really disordered it is more sinned against than sinning.

The Liver Function.—From the esophagus to the anus, every drop of blood gathered from the intestinal canal, every particle of food elements absorbed from the digestive tract, go to the liver, there to be overhauled, judged, corrected, passed or rejected into the bowel for excretion. Salisbury asserted that the liver excreted many medicinal agents, so that the only part of these that exerted any influence on the body was the trifle that escaped the liver and got past it into the general circulation; hence he advised remedies to be held in the mouth until absorbed, since the veins of this region do not empty into the roots of the portal system. Take a dose of morphine, and the liver shows its

fine discrimination by promptly throwing the poison out into the stomach and bowel, the kidneys excreting but a trace of the alkaloid. But if the contents of the bowel are delayed in their final evacuation the fluid portions of the fecal mass are apt to be reabsorbed, and thus the poison may circulate again and again between bowel and liver, intensifying and accumulating their effects, until toxic or even fatal results may follow.

Bowel Toxins and the Liver.—Apply this to the ordinary toxins generated in the fecal mass by bacterial activity, and we begin to see where the difficulties of the liver arise. Constipation retains these products in the bowel, and they are absorbed and again eliminated, with constantly increasing toxicity and bulk, until the liver reaches the limit of its possible powers, and is literally choked by the excess of poisons. Then the patient has a "bilious spell," an acute indigestion, the blues, melancholia; or perhaps a brisk attack of diarrhea or cholera morbus carries off the offending matters and frees him of his difficulties for the time.

Relief for Hepatic Sluggishness.—The liver is never sluggish; it is like the stalled horse in a puddle, and needs aid to withdraw the wain, or a lessening of the load. Empty the bowels and quit eating for a day, while the overworked digestive apparatus has a chance to rest and resume its normal functioning. The classic treatment by calomel followed by salines does this, not by "stirring up the liver," but by removing the overload, and possibly by checking the microbic activities.

Remedies that really increase hepatic action, like emetine, do not answer as well, unless enough is given to empty the stomach and bowels also. It is useless to treat the symptoms unless this matter of clearing away all the debris from the bowel is first attended to. The longer I practise medicine, the more important does this duty seem, and the further does the effect of fecal resorption extend in the causation of illnesses. The deleterious action of a blood containing a strain of fecal toxin, upon the delicate structures of the nervous tissues, and any others that happen at the time to be below par as to their power of resisting any noxae present, is a lesson one learns to appre-

ciate the more as his attention is directed to its possibilities.

Jaundice is always an indication of obstruction to the outflow of bile from the hepatic ducts. The obstruction may be due to inflammatory swelling in the duodenum at the mouth of the common duct, or along the extent of the ducts, to a calculus exceptionally and with easily diagnosed evidences; or to the pressure of a tumor upon the ducts, such as a carcinoma embedded in the hepatic tissues. In the latter case the jaundice is continuous and not necessarily attended by acholic stools, since but one of the bile-carrying vessels may be occluded.

Persistent jaundice may exist without either itching or coma, and with apparently excellent health, if the obstruction is not malignant and there is no inflammation of the bile ducts present. Pruritus may attend the jaundice of gallstone obstruction or that of cancer, and induce the most unbearable of the patient's sufferings. It is relieved surely by a full sweating dose of pilocarpine, but if the obstruction is permanent, as in case of a tumor, the itching will recur.

The danger and suffering in jaundice from gallstone obstruction depends on the presence of infective inflammation. I have known a calculus to be imbedded in one of the hepatic ducts so as to occasion continuous jaundice, with healthy, "cholic" stools and no appearance of ill health for a prolonged period; but if the ducts are infected there will be a troublesome and painful malady, with daily exacerbations of fever, chills resembling those of intermittent fever, and rapid loss of strength, until death ends the scene.

For these infectious inflammations of the biliary passages I have long looked upon sodium succinate as the specific, and in many years' use it has never disappointed me.

Complete Bile Obstruction.—It is more difficult to determine the advisable treatment when there is complete obstruction of the bile and when coma supervenes, steadily deepening until death will surely result, if relief is not afforded. As a simple mechanical condition, it seems that mechanical relief is indicated, and the surgeon

should cut down and remove the obstruction to the discharge of bile. But this condition has been found perilous in that hemorrhagic oozing is apt to carry off the patient. Unless atropine proves capable of restraining this form of hemorrhage, as it does nearly every other form, there is no known means of meeting the difficulty.

Quite empirically it has been found that cold enemas have a remarkable influence in removing biliary obstructions and restoring the bile to the stools. Possibly this is due to a stimulation of peristalsis that extends to the bile ducts, forcing out mucous plugs and inspissated secretions; but the fact remains, whether we can explain it or not.

For temporary obstructions we may utilize the method known as "blood-washing," abstracting small quantities of blood and injecting equal quantities of normal saline solution. By this the toxic content of the circulation is reduced, if the patient can stand the loss of blood. A better but slower way is to inject into the rectum half pints of saturated salt solution, cold, which quickly induces exosmosis and rids the blood of notable quantities of toxins without deterioration.

W. F. WAUGH.

Chicago, Ill.

COMMENTS ON THE LESSON

We owe our students an apology for the small amount of room given to the course the last three months, and particularly this month. The explanation is that we have had such a large demand upon our space that portions of the journal have had to suffer, and this portion very much. Thus, our leading-article department has kept getting longer and longer, as we have received more and more papers—and they continue to flow in in unceasing volume.

Next month, however, we promise more room for the Course. In addition to the installments to be contributed by Drs. Butler and Waugh we hope to have papers by Drs. Biehn and Neiswanger. We shall also devote a considerable amount of space to discussions of the lesson by our students.

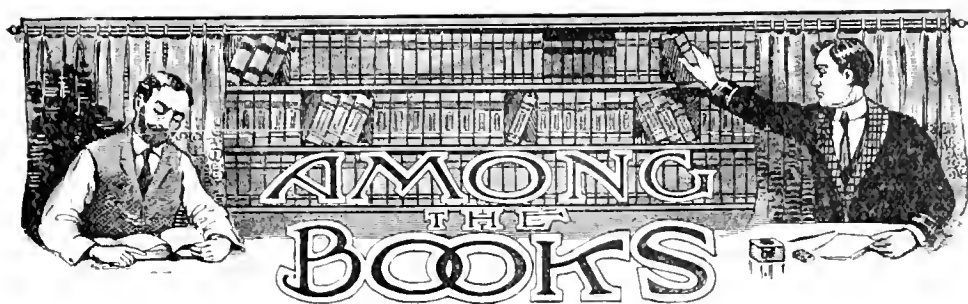
We are exceedingly anxious to interest more of the readers of *CLINICAL MEDICINE*

in this course. That doesn't mean, simply, that we want to enroll more of you as formal students (though we should like to do that also), but we want to get more to take an active part in the lessons themselves. We are sure that anyone who may read the lessons through will think of things that we have omitted; will be reminded of methods of treatment that they have found successful; will find flaws to pick with some of the expedients that seem to us good. Please bear in mind that nothing in this course is "sacred." Pick flaws if you feel like it. Add to it if you can. Make suggestions anyhow to let us know that it is attracting your attention—and that you are alive!

Take this great big, interesting subject of the liver. There ought to be suggestions enough in this number alone to elicit a dozen good strong therapeutic articles. Who will be the first to volunteer with one?

EXAMINATION QUESTIONS

1. What are the functions of the liver? Tell something about the chemistry of the bile, and its physiologic action.
2. Describe the hepatic circulation and what its relation is to the functions of the stomach and intestine.
3. What are the causes of acute hepatic congestion? What are the causes of passive congestion of the liver?
4. Outline a dietetic regimen for acute congestion of the liver.
5. In an acute case of this kind what would be the indications for cathartics and under what circumstances would you give each, and how?
6. Mention the remedies acting directly upon the liver and tell how they act.
7. What is a cholagog? Is calomel one? Podophyllin? Aloin? Euonymin? Iridin? Castor oil? On what part of the bowel does each act?
8. What is the significance of jaundice? Outline a differential diagnosis for this symptom. What are chloasmata, and what relation have they to liver troubles? To diseases of other organs?
9. Give a therapeutic outline for a case of chronic congestion of the liver, preferably telling of an actual case in your own practice.
10. What is the relation of hemorrhoids to hepatic congestion? Give internal treatment for hemorrhoids.



WICKHAM'S "RADIUM THERAPY"

Radium Therapy. By Dr. Louis Wickham and Dr. Degrais. Translated from the French by S. Ernest Doré, M. A., M. D. With an Introduction by Sir Malcolm Morris, K. C., V. O. New York: Funk and Wagnalls Company. 1910. Price \$5.00 net.

To any physician who had the pleasure of hearing Dr. Wickham lecture, on the occasion of his recent visit to this country, the volume before us must prove of particular interest. But to those not so privileged it is all the more to be recommended as embodying the results of radium treatment in the hands of the author, who has done more than any other investigator to determine the possibilities and also the limitations of this powerful therapeutic agent. In fact, Sir Malcolm Morris says justly, in his Introduction, that in the application of radium to medicine there are two great epochs, "before Wickham" and "after Wickham."

The book of this justly famed French physician, which has been very well translated, after a consideration of the physics of radium and the instruments used in its employment, discusses the therapeutic results obtained in a large series of cases, principally of affections of the skin, some of which were malignant. The author finds that radium rays have a selective action on certain diseased tissues, including carcinomata, angiomas, keloids, eczemas, and tuberculous glands; that they can modify such tissues without irritation or the production of super-added inflammation, by diverting the pathological process toward a process of repair. This action—and this is important—may be exercised not only on easily accessible lesions, but also on those situated at con-

siderable depth. A subcutaneous malignant neoplasm, for instance, may thus be favorably influenced without any irritation of the skin.

The book, it may be added, is beautifully printed and profusely illustrated.

RICKETTS' "SMALLPOX"

The Diagnosis of Smallpox. By T. F. Ricketts, M. D., B. Sc. Illustrated from photographs by J. B. Byles, M. B., B. C. New York: Funk and Wagnalls Company. 1910. Price \$6.00 net.

The author of this work is medical superintendent of the Smallpox Hospitals (London) and of the River Ambulance Service of the Metropolitan Asylums Board, and may, therefore, be said to possess an unusually extensive knowledge of the subject, on which he presents the diagnostic features of a disease which, since Jenner, and through him, has become a different disease, easier to suffer but harder to distinguish. The author shows why at the present day the diagnosis of smallpox is so much more difficult than it formerly was, while, on the other hand, this recognition nowadays is much more important, because then it was everybody's lot to get smallpox and there was little attempt to segregate the afflicted, while now the presence in a community of a case of smallpox causes agonies of frightened anticipation among the entire population.

The author discusses the diagnosis from the various possible view-points entering into its consideration, from the distribution and appearance of the lesion, the eruptive and the toxic fever, etc.; he also describes the various types of the disease, and the

diseases with which it is apt to be confounded.

The book is profusely illustrated, some of the illustrations being in color. These color-plates were produced from triple negatives obtained by the Sanger-Shepherd process of color photography and are of particular value in conveying an accurate and life-like impression of the subjects treated. This is of the greater interest, as the present is probably the first medical work which has been freely illustrated by means of color photographs taken from life.

The book is naturally of particular interest to health-officers and to physicians in charge of smallpox hospitals, but the general practitioner also will find an immense amount of useful information which often will stand him in good stead.

BUTTNER'S "FLESHLESS DIET"

A Fleshless Diet. By J. S. Buttner, M. D. New York: Frederick A. Stokes & Co. Price \$1.35.

The doctor who is looking for a readable and right-to-the-point presentation of the evidence in favor of vegetarianism will not be disappointed in this book of some 225 pages.

A lot has been written on this subject in the last dozen years, but so much has come from half-educated "naturopaths" and unscientific enthusiasts that we scarcely have known where to turn for reliable information.

In this book we find a very reasonable and believable argument against the use of meat. The author shows no inclination to jump at conclusions or to pawn off on the reader near-facts for facts. It is refreshing, for example, to find him acknowledging, in the fore part of this book, that the anatomy of man provides little if any argument for his side of the case, and, furthermore, he does not hesitate to give those of opposite mind an opportunity for defense. But he loses nothing by this; his condescension only serving to strengthen his position and to make the book more interesting.

As we turn over the pages we feel that the writer knows whereof he writes, and it is plain that he took pains to weigh the opin-

ions of others before he whittled his pencil for the task in hand. Throughout he quotes other investigators freely—Chittenden and the rest, whom we look upon as authorities on nutrition. Of practical service are the score or more interesting tables and the menus in which meat has no part. Considerable space is devoted, and with propriety, to comparing the power and endurance exhibited by vegetarian and meat-eating athletes, in foot-races and other performances. Repeatedly the superiority of meat abstainers has been demonstrated in tests of this kind.

It will be the exceptional man who fails to feel the persuasiveness of this book. Few readers will lay it down without conceding at least the likelihood of meat being, as the author claims it is, an unnecessary and even dangerous food-stuff.

Of course, we doctors are ready to admit, before even taking up this book, that many people eat too much meat, and some of us may admit eventually that our patients (and ourselves as well) might be better off with no meat at all. But we shall not be too insistent in the matter; the ingrained taste for meat and the belief that without it no one can be well and strong is not to be over-ridden in a year, a decade or even a century.

For most people, we ween, the aroma of roast beef and the savor of tenderloin will ever prove resistless; nor will reassuring reasons be lacking for satisfying the ancestral tastes. As Benjamin Franklin says in his autobiography: "So convenient a thing it is to be a reasonable creature, since it enables one to find or to make a reason for everything one has a mind to do."

HARRIS' "HYGIENE OF PREGNANCY"

This little pamphlet, issued by Dr. E. S. Harris, of Higginsville, Mo., was written by the author for the purpose of providing his patients with a safe and reliable guide through the stages of pregnancy, confinement and the lying-in state, and of so instructing them that they may be able to avoid so many indiscreet things usually considered of little importance but which are fruitful of such numerous evil results. There can be no doubt about the usefulness and advisability

of such a guide written by physicians for their patients, and Dr. Harris has accomplished the task admirably. These pamphlets are furnished at the rate of 10 cents each, for distribution, but on orders for 25 or more copies the physician's name and address will be printed on the front cover. Only one physician in a town will be supplied.

THE AMERICAN MEDICINE CASE BOOK?

The American Medicine "Case Record Book," prepared and arranged by the Editorial Staff, American Medicine Publishing Company, 84 William St., New York City. Price \$1.00.

This is a splendid representative of the class of case records that are kept in book form. It consists of an index and blank sheets for the case histories, each occupying two pages. The first page offers space for the history and result of clinical examination; the reverse for the results of laboratory examination and for treatment. There are two figures added to each case blank for entering the local findings, both in chest and abdomen, and we consider it an excellent idea that the principal organs are indicated in these figures. This case record is one of the simplest in the market, and will prove of great assistance to the practitioner who has not the time or opportunity to take extensive notes on his cases.

ELLINGWOOD'S "ECLECTIC PRACTICE"

The Eclectic Practice of Medicine, with Special Reference to the Treatment of Disease. By Finley Ellingwood, M. D., formerly Professor of Materia Medica and Therapeutics in Bennett Medical College, Chicago, from 1900 to 1907. In two volumes, bound as one. Chicago: Ellingwood's Therapist Publishing Company. 1910. Price \$6.00.

In this volume Dr. Ellingwood gives an excellent epitome of the practice of the eclectic school. This branch of the medical profession has, since the organization of this sect, devoted itself to the study of the clinical aspects of disease, the symptoms presented by the patient, and the application of reme-

dies thereto. The laboratory of the eclectic has been the clinical laboratory—the sick-room. He has paid but incidental attention to pathology, and in this line Ellingwood's book is naturally deficient. However, it is presumed that every physician who reads these lines has his regular textbook—Osler, Anders, French, Wilcox—and in these the pathology is given copiously.

We of the regular school have studied pathology, and naturally have made far greater advances along this line than have the sects, which have paid only incidental attention thereto. But just as naturally, those branches of the medical profession which have made a special study of the patient, and of the action of the remedies given to him, have made advances along those lines.

The reader will find in Ellingwood's "Practice" a wealth of therapeutic resource not to be obtained from the authors of the regular school. This material is of variable value, for the reason that it is based on clinical studies almost exclusively; nevertheless, among it there may be found many a valuable hint, many a veritable find may be dug out, and many a suggestion that proves out when put to the test of actual clinical trial. As a supplement to the regular textbook, this work is invaluable. It is a later and consequently more up-to-date book than is Lloyd and Felter's "American Dispensatory," occupies a different field, and presents the more recent work done in this department.

We have reiterated our opinion that there is no present excuse for the existence of medical sects, and we believe that the American Medical Association is broad enough to shelter within its limits every justifiable phase of medical creed and practice, and that individual freedom of belief and action are not in the slightest degree hindered by membership therein. The eclectic has much to learn from the regular school. The regular school can learn something from the eclectic, yes he can learn much from him.

We would advise any man who is earnestly desirous of doing the utmost for the benefit of his patient, that he procure and study Ellingwood's "Practice," while not neglect-

ing, of course, the great works of the regular school.

STILL'S "BACTERIOLOGY AND PARASITOLOGY"

Practical Bacteriology, Bloodwork and Animal Parasitology, Including Bacteriological Keys, Zoological Tables and Explanatory Clinical Notes. By E. R. Still, A. B., Ph. G., M. D., Surgeon, U. S. Navy. Second Edition, Revised and Enlarged, with 91 Illustrations. Philadelphia: P. Blakiston's Son & Co., 1910. Price \$1.50.

Part I treats of bacteriology: Apparatus, culture media, staining; bacteria, their study and identification (7 chapters); water, air and milk; immunity. Part II, the blood: Micrometry and preparations; normal and pathological blood. Part III, animal parasitology: Classification and methods; protozoa; flat and round worms; arachnoids, insects, mosquitoes, poisonous snakes. Part IV, clinical bacteriology and animal parasitology of the body-fluids and organs (12 chapters). There is an appendix treating of the mode of making preparations, diseases of unknown etiology, and the clinical examination of the urine and gastric contents.

Throughout the work presents that practical character so often promised and so rarely fulfilled. It is difficult to conceive how more real information of the kind presented one can use in active practice could be concentrated in the 345 duodecimo pages than found here. The more recent subjects, such as the Wassermann reaction, anaphylaxis, are fully discussed. The price of the book is only a dollar and a half, but it seems well worth much more.

WILCOX' "TREATMENT OF DISEASE"

The Treatment of Disease: A Manual of Practical Medicine. By Reynold Webb Wilcox, M. A., M. D., LL. D. Third Edition, thoroughly revised and enlarged. Philadelphia: P. Blakiston's Son & Co. 1911. Cloth, 8vo. pp. XXV-1023. Price \$7.50.

This work of the retired Professor of Medicine at the New York Postgraduate

Medical School is not simply one more textbook on Practice in a field already well filled, but is one that has distinctive features of its own. Withal, it has been brought down to the present date, and little of the newer work in pathology has escaped the author.

The principal impression made by a cursory examination of the book is the independence of the author. Dr. Wilcox dares to think for himself, and is not mainly occupied in being "correct." For instance, he dares treat a catarrhal appendicitis medically, albeit not very effectively. And just hear what he says of the treatment of gallstones (page 511): "Surgery has a distinct place in the treatment of gallstones, but the treatment of gallstone disease may with truth be said to be entirely medicinal. Operative measures are adapted only to gallstones of gall-bladder origin, and then only under conditions which demand mechanical relief."

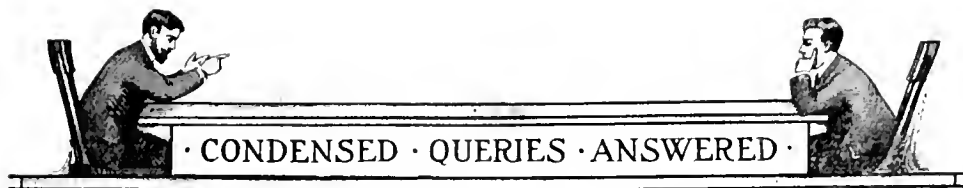
From much experience we warn Dr. Wilcox that such talk will make him disliked by the surgeons. All the same, those of the medical profession who are not seeking excuses for operating but really desire to know what alternatives are at their command, will find this work a valuable addition to their libraries.

SUTTON'S "OSTEOLOGY"

Osteology and Syndesmology. By Howard A. Sutton, A. B., M. D., and Cecil K. Drinker, B. S. Philadelphia: P. Blakiston's Son & Co. 1910. Price \$1.50.

As to its scope, we quote from the Preface: "This manual for the student's introduction into the study of anatomy is arranged in the order found simplest and most useful in presenting the course in osteology at the University of Pennsylvania. Summaries occur at the end of every section, which is not a summary in itself. It is hoped they will facilitate review and will be of service in the quizzing of the student with his fellows—a method of work most necessary in such a course."

The text is well arranged and will be useful, not only for the student, but also for the surgeon in preparing for operations.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

ANSWERS TO QUERIES

ANSWER TO QUERY 5665.—“Nocturnal Emissions.” I will give the doctor a remedy that has never failed me, and I have had many cases of nocturnal emissions to treat. Give calomel, 1-6 grain, and podophyllin, 1-6 grain, every hour for six doses, then a tablespoonful of saline laxative in a glass of water every two hours until the bowels are thoroughly cleaned out. Follow with the compound sulphocarbolates every two hours. Also give 1-100 grain of hyoscine hydrobromide t. i. d. and 10 drops of specific

tincture of thuja. After one week of treatment the patient can sleep.

DR. W. HERINGTON.

Green City, Mo.

ANSWER TO QUERY 5665.—In regard to Query 5665, “Nocturnal Emissions,” February number, would say that circumcision is specific for those cases, if properly performed. No other treatment is required.

G. G. TALMAGE.

Washata, Ia.

QUERIES

QUERY 5676.—“Black Tongue—Melanokeratosis.” J. W. McD., Texas, describes the symptoms of a case he has in charge at the present time.

Patient, woman, colored, age 42 years, has “a thickness of the tongue,” which is covered with a very dark coat, resembling “blackening,” on its upper surface and a long white fur-like mass always on the under surface. The tongue burns fearfully almost all the time. The veins of the under surface show plainly and are full and dark. This woman will have sick fainting spells, and at other times feels all right and goes about her usual duties.

Make a scraping from the tongue and forward in a sterile vial, or smear thinly upon a slide, and forward to us for examination. A blood smear should also be sent.

It must be remembered that the “fur” on the tongue (in health or disease) is composed of epithelial scales, debris of food and microorganisms. Micrococci, thread and

spore forming bacilli, spirochaetae, vibrios and yeast organisms are all found in scrapings from various tongues. The micrococci form the bulk of the fur and are attached to the filiform papillae. Discolorations are therefore usually limited to that portion of the tongue where the fibrillae are plentiful; the circumvallate and fungiform papillae rarely become furred. Immediately in front of the circumvallate “V” the papillae sometimes grow to an inordinate length and microorganisms cling to them, staining them a dark color, producing the “black hairy tongue”—*melanokeratosis* or *nigrities*. In this disease the discolored area is at first small but it may extend until the major part of the dorsum is affected. In some cases the tips of the papillae are jet black, the color fading to a light brown at the base. Vollmer, a careful observer, states that half his cases were luetic. Cancer has followed or made its appearance with nigrities. In one case reported the cancer commenced near

the frenum, the discolored area being small and in the center of the base of the tongue. On removal of the organ this particular portion was found free from disease. Nigrities usually disappears in a few weeks, but it may reappear. In one instance the patient shaved off the long tendrils every ten days but the growth recurred and intense pain in tongue with dysphagia was complained of. Staphylococci, leptothrix and an unidentified spore (from which a black mold was cultivated) were found in the "shavings."

Unless a complicating glossitis, systemic dyscrasia or local neoplasm exist, nigrities may be regarded as a clinical curiosity and the patient should be assured that the discoloration is objectionable from the esthetic standpoint only. It is, however, quite essential to exclude positively Addison's disease, syphilis, tuberculosis and cancer. We are a little suspicious of a malignant condition in the case under consideration. We trust you will send the scraping and full clinical data so that we may be able to make a definite diagnosis.

QUERY 5677.—"The Exhibition of a Tenuicidae during Pregnancy." F. M. S., Indiana, inquires: "Will the accompanying formula (oleoresin malefern, 2 drams; chloroform, 60 minims; croton oil, 4 drops; castor oil to make 2 ounces) be likely to produce abortion if exhibited to pregnant women?"

This preparation may ordinarily be given to the pregnant woman (at least during the earlier months) with safety. However, as you are aware, some women abort at the slightest provocation. Any active aperient suffices to dislodge the ovum from the uterus.

After the ninth week, up to the end of the seventh month, we should not hesitate to exhibit the tenuicidae. If pregnancy is advanced into the eighth month it will be wiser to leave the tenia in peace and evict it after delivery.

QUERY 5678.—"Hyperchlorhydria." H. R. T., North Dakota, forwarded a specimen of stomach contents secured from Mr. P. P. after ingestion of the usual Ewald test-meal, consisting of one and one-half ounces (about two slices) of thoroughly dry toast and eight ounces (a glass) of water. He asked for a

complete examination and stated: "Patient is thirty-eight years old and has been sick for thirty years. He vomits every day or so. Please let me know what is the matter with him and advise treatment."

The report of our pathologist shows the patient to suffer from a marked form of hyperchlorhydria. Under the circumstances we would suggest that you examine Mr. P. very thoroughly and report findings.

An excess of hydrochloric acid is due, as a rule, to one of two things, hyperchlorhydria proper or gastric ulcer. In hyperchlorhydria pain is experienced one to three hours after eating, at the height of digestion, and is relieved by the ingestion of food and the exhibition of an alkali. In gastric ulcer pain commences as soon as food is taken into the stomach and continues until that viscus is emptied.

There is a localized tenderness in gastric ulcer which is absent entirely in almost all cases of hyperchlorhydria and when it does occur is merely due to the presence of an intensely acid fluid. Vomiting is not always present, though sometimes it is frequent, though the digestion is good. Such food as is retained is thoroughly assimilated. Occasionally the pain experienced an hour or two after meals is so intense that the patient starves himself.

Patients suffering from hyperchlorhydria should be carefully fed, the articles of diet being of a nonirritant character and such as combine readily with HCl, i. e., contain considerable proteid. Milk, well-cooked eggs, zwieback, stale toast and wheat bread meet the indications. Hot drinks, alcohol, and condiments should be strictly forbidden. Juglandin may be given before meals and a neutralizing tablet exhibited an hour, an hour and a half or two hours after meals. One or two tablets may be given as may be necessary to produce results. The writer has found it desirable to give with juglandin very small doses of atropine; the valerianate often serves excellently. Another excellent combination is one of cerium oxalate and bismuth phenolate.

Intestinal activity must be maintained, and gentle massage or faradization of the gastric area practised. If you care to report your patient's progress under these conditions

we shall be pleased to make therapeutic suggestions from time to time.

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 QUERY 5679.—“Prolapsus Uteri.” H., Oklahoma, has a patient suffering with prolapse of the uterus, “also of the vagina.” At times “it comes down the size of an egg, then it will go back and for a half day or sometimes a week it will not give any trouble. Her general health is good, age fifty-seven years. Kindly outline a treatment that will give relief.”

Surgical procedures or the application of a stem or ring pessary are essential. It is also, of course, necessary to recognize an existant cystocele or rectocele. If the prolapsed body is the uterus itself the round ligaments may be shortened; correction of the vaginal relaxation may, however, suffice. You can, of course, give your patient for tonic effect such drugs as iron, strychnine and quinine (the arsenates would prove effective) and use, locally, some astringent, packing the vagina with gauze strips thickly buttered with vaseline and dusted with an astringent antiseptic powder. The uterus should be replaced first, the patient being in the knee-chest position. Tannic acid one ounce, glycerin four ounces may be prescribed, two tablespoonfuls to a quart of water being used as a vaginal injection night and morning. A decoction of oak bark is recommended, but in elderly patients the condition is apt to prove intractable save to operative procedures. Relief of uterine prolapse may usually be obtained by a properly fitting pessary, but this is not of service if the condition be one of cystocele.

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 QUERY 5680.—“The Old Aconitine Dosage Question Again.” J. C. M., Oregon, calls our attention to the difference in the dosage of aconitine as laid down by Shaller and Radue.

In his “Guide to Alkaloidal (Dosimetric) Medication,” Dr. Shaller says: “One granule of amorphous aconitine, gr. 1-134, is to be dissolved in twenty-four teaspoonfuls of water for each year of the patient, together with one additional granule.”

Dr. Radue says: “Take at ten years of age twenty-four granules of gr. 1-134 in twenty-four teaspoonfuls of water. A teaspoonful at a dose.”

“Now according to Dr. Shaller’s rule the dose for a ten-year-old child would be eleven granules, gr. 1-134, in twenty-four teaspoonfuls water, which is the rule I have always followed.”

We have many times discussed the Shaller rule, i. e., one granule for each year of the child’s age and one for the glass. Personally we consider the dose as too small. We do not hesitate to give one-eighth or one-fourth of a granule of aconitine to a year-old child. Dr. Shaller, realizing the potency of the remedy and desiring to formulate a rule which would be perfectly safe under all conditions, suggested the dosage under discussion.

A child of ten may receive one-half to one granule of aconitine—provided the drug is indicated—half-hourly or hourly to effect. There can be no “definite dosage rule,” Doctor, as we have so often pointed out. This general principle holds: “The smallest known-to-be-effective dose (for an adult) repeated at short intervals to effect.” Of course when we are dealing with such a drug as aconitine we must be governed by the conditions present in the patient—and not infrequently by the intelligence of the attendant! Given a normal year-old child, presenting every indication for aconitine, we would certainly not waste time in producing the effect we desire. We would order one-eighth of a granule, or, even one-fourth, in water, half hourly, *until remedial results or aconitine effect is obtained*. Usually four to six doses cause a drop in the temperature and moisture of the skin, especially if elimination has been secured or is being obtained meanwhile.

The attendant should, however, be instructed to give no more than a safe number of doses, for if the remedial effect of the drug is not secured before the safe maximum dose has been exhibited we have erred in the selection of our remedies or have omitted some essential therapeutic procedure.

The young practitioner needs definite rules, but the experienced clinician soon learns to base his dosage upon conditions he has to contend with.

As you can readily see, the ten-year-old child medicated according to Shaller’s rule *does* obtain an appreciable dose of aconitine,

whereas, the one- or two-year-old infant received an almost inappreciable quantity of the drug, and infants, as you know, stand a considerable quantity of aconitine and prompt and positive effect is invariably desirable in treating the little ones.

While we are on this subject I want to urge physicians to familiarize themselves with Dr. Radue's fine book on "Diseases of Children." It is the boiled-down experience of a practical and successful man. Price \$1.00.

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 QUERY 5681.—"Delayed Septicemia." W. K., Bahamas, outlines a recent obstetrical experience and asks criticism and suggestions. He was called to see a patient, a woman thirty-four years old, on December 15 last. Termination of pregnancy was not expected till the end of January. She was suffering intense colicky pain. A copious enema was given and examination showed the os uteri somewhat dilated. The woman had "suffered for years with her bladder," the urethra being much congested. She had borne five children, only one now living. The following evening she gave birth to a child which only lived a few hours. The doctor states: "The placenta was not in a normal condition, so I gathered that a portion was still adherent. Gave her ergot, then continued echinacea and calcium sulphide. The temperature being 102° F., I also gave the dosimetric trinity. Septic conditions seemed to be setting in, so I curetted the uterus, bringing away a quantity of septic matter. I continued this, syringing uterus with twenty percent peroxide of hydrogen solution. The patient seemed to be somewhat better for a time, but after ten days her stools were copious, although she had been well cleaned out. She passed peacefully away on the twentieth day after delivery.

"Did the patient die of puerperal septicemia alone or would you be led to think there was some growth?

"What is the best course to take when placenta is not whole?

"Is it well to bandage in the patient after birth of child?

"What is the cause of excessive diarrhea after childbirth?"

Your patient died of profound puerperal epticemia. Any good modern work upon obstetrics describes the conditions you encountered; they are present in most cases of delayed septicemia.

In the first place, Doctor, you should not have used peroxide of hydrogen. Never use this in a septic uterus as there is danger of forcing infected material into the fallopian tubes. In this case peritonitis existed later; hence the diarrhea, which was pathognomonic. Let us urge you to read carefully the chapters upon post-puerperal conditions in some of the modern textbooks. If the placenta is broken fragments should be removed promptly, if possible with the finger, and the uterine cavity irrigated with bichloride, iodine or creolin solution. In some cases it is necessary to curet (with a dull instrument), then to pack the uterine cavity lightly with gauze. Drainage must invariably be provided. The bowels must be kept thoroughly open and clean and intestinal and systemic antiseptics exhibited.

We believe that the majority of modern obstetricians recommend the application of a moderately tight abdominal binder. We should not think of leaving a woman without such support; in fact we personally place a *pad* over the uterus and maintain firm pressure with the binder for two or three days. After involution has progressed and the woman begins to sit up in bed the pad may be removed, but the binder or a good abdominal belt should be worn as a support to the abdominal muscles for some time. Unfortunately we have no idea of the conditions present in this particular case prior to or during delivery. Is specific syphilitic infection to be excluded?

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 QUERY 5682.—"Vaginitis and Cystitis." J. N. R., Kentucky, asks local treatment for a vaginitis, and for a frequent desire to urinate, or cystitis.

Has the doctor excluded gonorrhea? In many instances the vaginal congestion is secondary to inflammation of the uterus or adnexa, hence it is quite essential to base treatment upon conditions present in the individual. Depletion of the affected area is generally indicated.

You cannot do better than apply a glyceromagnesium suppository once or twice a week and order copious hot alkaline douches every other night on retiring. In some cases an astringent germicidal tablet may be applied well up into the posterior fornices every second night, after a thorough douching with the antiseptic solution. Everything, of course, depends upon the underlying conditions. If the cervical canal is affected it must be treated; a subacute metritis or endometritis may require attention. What is the age of the woman, and nature of discharge? Are the vaginal secretions acid or alkaline?

We outline herewith the basal treatment for cystitis. Here again, however, conditions control medication. A cystitis due to infection with bacillus coli will not yield to the treatment which will prove efficacious in an ordinary catarrhal affection and we must remember the possibility of a streptococcic, gonorrheal or tubercular cystitis. "Frequent urination" again is but a symptom. It may be due to hyperesthesia of the deep urethra, weakness of the sphincter vesicæ, hyperacidity of urine, prostatic congestion, or in the female, uterine or ovarian inflammation. Give us clearer data, and have a laboratory examination of a sample of the urine made. Irrigate the bladder, first with a weak boric-acid solution, then with antinosine (the sodium salt of nosophen) 1 to 1000 or ichthyol, 2 percent. Bring about normal acidity of urine (if alkaline) with ammonium benzoate, 2 grains every three hours, adding arbutin one grain. It will be well if you add to the half glass of water, which should be taken with this medicine, a dram of a good preparation of hydrangea. Three times a day give a formin (urotropin), 5 grains, with four ounces of water. Salines daily on rising. Barley water, made thin, is the best thing for the patient to drink. Keep the bowels open and the skin active with warm salt sponge baths, taken every other night at bedtime, following with brisk friction with a rough towel.

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 QUERY 5683.—"Alcoholism." F. S. B., Oklahoma, asks: "What can be done for a fellow who wants to quit the liquor habit,

one who drinks periodically—something to help tide him over the appetite period?"

Naturally the man just recovering from a prolonged spree will require treatment which would not be suitable for the individual seized with a sudden desire to drink, or just beginning a debauch. Hyoscine or atropine is the main remedy. If you can get the patient under your control give him whisky (exhibiting small doses of hyoscine meanwhile, which produce a distaste for the liquor) and after he has had a few drinks administer a hypodermic of apomorphine. He must not know what the syringe contains. It would be well, therefore, to give earlier two or three hypodermics of strychnine. Call his attention to the fact that the treatment is getting in its work. Later in the day, or the next day, offer him another drink and if possible dope that drink with apomorphine. If this is not feasible repeat the shot. Some patients keep a very sharp eye on the whisky bottle and if they know positively that it is not doctored believe firmly that a natural nausea follows the mere smell of whisky.

In the intervals push eliminants to full effect; as a tonic, give nux vomica and capsicum, with quassin and large doses of avenin; each dose should be taken with a copious draught of hot water. This is a basal treatment, of course, and must be modified to suit individual requirements. Hot baths and plenty of hot coffee should be ordered.

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 QUERY 5684.—"Thiosinamin in Deafness." G. H. T., South Carolina, is treating a case of deafness in both ears, the right being the worst, in a man fifty-six years old, no traumatism, malaria or other acute diseases. He has catarrh of nose and throat. Occasional dizziness, buzzing in ears and head all the time; dull, heavy feeling on top of head; burning and itching inside and around the ears. Appetite good, bowels all right under medication. Examination reveals slight retraction of the drum; some pharyngitis. These conditions have been treated by politizerization and the usual gargles and astringents; attended to his general condition, but there is no improvement in his hearing. The doctor has recently read several articles in CLINICAL

MEDICINE recommending thiosinamin and asks whether we think this agent has been sufficiently "tried out" to be used with safety; also whether it would be of service in this instance?

The wisest procedure would be to have this man consult a thoroughly experienced aurist. The nasal catarrh, of course, you can control. If there are adhesions of the ossicles or fibrous changes have taken place then, if pushed to effect, thiosinamin might (with iridin and arsenic iodide as alternants) prove of service. If inflammatory or suppurative conditions obtain, however, thiosinamin would be contraindicated.

The retraction of the drum and catarrhal history would lead us to suspect adhesions. Let us point out again the absolute necessity of treating the underlying catarrhal condition.

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 QUERY 5685.—"Choreiform Affection." G. M. S., Minnesota, desires help in treating a boy eleven years old. The child is fairly well nourished, active as other boys, and bright in school. He was never strong; mother died of tuberculosis shortly after his birth; maternal grandmother had uterine cancer and maternal grandfather alcoholic. Paternal history good. At five years of age this boy began to make grimaces and peculiar noises which have slowly and steadily grown worse. Never has had any illness except measles and whooping-cough. At the present time he draws back one corner of the mouth and twists head around toward shoulder. Jumps occasionally and kicks a foot forward and more or less continually makes grunting noises, sometimes aloud, sometimes with the breath, and frequently repeats words that have just been uttered. The boy has received arsenic, bromides, gelsemium, and other remedies, without any beneficial effect.

Before we outline treatment for that boy we want a much clearer idea of the condition. His urine should be examined and the reflexes, deep and superficial, tested; the doctor should examine the prepuce, sphincter ani, nares, and nasopharynx, and report any abnormalities. Is there any possibility of masturbation? How about digestion? Are the bowels active?

On general principles we might institute the following treatment, which has proven extremely efficacious: Put the child with a sympathetic but firm nurse and order rest, with rhythmic exercises of the muscles (those affected, especially) at short intervals. Give a plain, nutritious diet, and keep the bowels active. Salt sponge-baths should be taken daily, and massage (also vibration if possible) applied to the spine and limbs.

The medication consists of one-half to one granule of veratrine every two hours till sedation. Very minute doses of codeine will prevent vomiting (give only if nausea is complained of). Other useful remedies are: Scutellarin, gr. 1-3, macrotin, gr. 1-6, avenin, gr. 1-2, these every three hours; juglandin, gr. 1-6 prior to meals; and zinc phosphide, gr. 1-67, after eating. *Passiflora incarnata* should be taken at night—dose enough.

This method will cure most cases. The veratrine usually is given for a full thirty-six hours and may have to be repeated. If the case drags, push picROTOXIN "to effect"—remedial or physiological—then administer cicutine for some days, one granule every four hours. In rare cases a few doses of atropine valerianate, followed by cannabin, will stop the habit-spasm, and if the arsenates of iron, quinine and strychnine, with nuclein, are then given after each meal, and scutellarin and avenin are pushed between meals, for some time the disorder should not return.

In all cases it is essential to continue tonic treatment for a month at least, after the gross symptoms have disappeared. The child should be taken from school and sustained mental effort forbidden. It should be remembered that choreiform children are acutely sensitive to the mimicking of their fellows. Outdoor life and active exercise (moderate at first) mean much. If the patient can be taken off to the woods and allowed to return for a few weeks to primitive methods of living a cure will almost assuredly follow.

Always remember the possibility of intestinal parasites in such cases. A few doses of santonin and calomel, as a teniacide, often work wonders.



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Medicine as a Business

DESPITE the aureous glory that emanates from the head of the statue, he has feet of clay. Though we take the loftiest view of the professional character of the physician and his work, the most altruistic conception of his relationship to the public, there remains, nevertheless, the stern fact that the doctor must eat, must be clothed, sheltered, all the other necessities of life must be his. All these things cost money; and no consideration of the doctor's beneficent life will induce the butcher, the baker, the candlestick maker, to supply him these necessities without due recompense. Which leads us to remark that the radical difficulty lies in the customary method of remunerating the doctor for his services.

In his hours of ease and health, the citizen has no use or thought for the doctor; but when affliction wrings his brow or ties his little insides up into hard knots, this self-same citizen very promptly resorts to the man of medicine.

Unfortunately, this is the very period when by reason of his illness the help-seeking man's own income stops, while his outlays are vastly increased. It follows that, for the average citizen, the physician's services are only required at the time when said citizen is in a period of financial stress, which may be a long time indeed. Conse-

quently, by reason of his humanitarian position in the community, the doctor must perforce wait for his payment until the patient is well, his other bills are paid, and a surplus has accrued which will enable him to defray this intercurrent and hence as a rule unprovided-for expense.

No wonder the doctor is poor. He could not be otherwise with such an outgrown, preposterous financial method. Besides, this system of remuneration is the principal difficulty in the way of establishing such a relation between the physician and his *clientèle* as would vastly facilitate his work, his income and his patient's health.

We have in the United States of America about one physician to every six hundred inhabitants. This is an enormously larger proportion of medical advisers than any other country in the world possesses, and at first sight leads to the suggestion that the profession here is frightfully overcrowded. Nothing, however, is further from the truth, and the fact that this opinion is universally accepted is an evidence of the shallow thought which is usually given to such propositions.

The truth is that the American citizen requires vastly more medical attendance than the people of any other country on earth. The American, on the average, is more intelligent and takes more forethought

than any other. I am speaking here of the average, and not of a small, highly cultivated upper class; for we must not forget that America has no peasantry, except it may be the bulk of the negroes of the south. The average American citizen believes in attacking disease early, before it has established a foothold; hence he does not wait until the case looks desperate, or until domestic treatment has failed, before calling in the advice of an expert.

It is impossible to determine what proportion of unauthorized practitioners should be added to the number of the regularly registered physicians of this country, but it is safe to assume that there are not less than 50,000, and that out of the 600 population falling to each physician, at least 200 are attended by other than duly, legally and scientifically qualified physicians. It is my firm belief that the reason for this is that the average physician cannot possibly do justice to a practice of six hundred persons.

We will suppose our doctors undertake the care of this number of persons. It must be remembered that in the enumeration all classes of practitioners are embraced; consequently, our doctor must do, not only the medical work, but the surgical, obstetric, gynecologic, pediatric, rectal, eye, ear, nose, throat, skin, and all other forms of practice.

Suppose he sees each of his patients twice a month. Taking twenty-five working days (for the doctor has a soul to save and needs his Sunday rest and worship as much as anybody else), he must see forty-eight persons a day. Let him devote fifteen minutes to each person, and he has consumed twelve hours out of the twenty-four in this work! Add to this the attention to those who are ill at the time, the accident cases, the average number of confinements, his laboratory work, study, and the time required to keep informed on the progress of his profession—is it possible a man can do this without an assistant?

That this is not done is the cause of incalculable ills, for according to our present system the physician is not called in until the patient is actually ill. How many times we are constrained to say that, had we been called earlier in the course of the disease, it might have been broken up.

Preventive medicine is the watchword of the day. It is our duty to detect the tendencies to disease, and so advise our patients that their health and working capacity will not be impaired by the development of maladies which we alone are capable of detecting in their incipency, or of foreseeing before they have actually begun, from our study of the patient's conditions, environment and habits.

The difficulty that lies in the way of this matter is the miserable, crude method of charging for each visit. If our work were so arranged that each of our six hundred patients paid us ten dollars a year, we should have an income far in excess of that of the ordinary physician, yet at an expense which is easily within the reach of every patient, of every individual; especially as by it sickness would be largely prevented, and would not, if it came, throw upon the patient another burden through the attendance of the physician.

I quite expect that somebody will raise against me the appropriate charge of "favoring contract practice." This, however, is simply an instance of the innate conservatism of the profession. We are not accustomed to doing business in this way, hence we do not do it. We have been accustomed to the old way, and that seems right.

The leaders of the profession, who are drawing from \$50,000 to \$100,000 annually from their work, see no necessity for the change; but if such a plan could be instituted it is evident that nearly if not all the difficulties of the profession would vanish. The physician would have such a firm hold upon his patient that he need fear no interlopers. His fences would always be kept up, for many a time a patient drifts off into Christian science or other hallucination, because his physician is too busy to run in for a social call which would keep up the friendship between them.

So long as we are to have paternal government, and the old, American, go-as-you-please and do-as-you-please, do-right-because-it-is-right and not because a policeman is at your elbow, is rapidly becoming a thing of the past, we might as well go the whole length and do the matter right while we are about it.

The inhabitants of each community should be equally divided among the physicians, and these should have no incentive for poaching on their neighbors' preserves. If no increase in pay resulted from such acts, they would soon cease. If there were no extra fees for surgery, it is possible that operating would become somewhat less common. The profession would be more nearly approximated to the ideal of a fraternity; and while a few colossal incomes might be diminished, every member of the profession would have enough.

I shall arrive! what time, what circuit first,
I ask not: but unless God send his hail
Or blinding fireballs, sleet or stifling snow,
In some time, his good time, I shall arrive.
He guides me and the bird. In his good time!
—Browning, in "Paracelsus."

QUANTITATIVE FOOD PRESCRIBING

H. D'Arcy Power of San Francisco reprints, from *The California State Journal*, his interesting article on "Quantitative Food Prescribing." He says, very justly, that we condemn the shotgun prescription and condone the shotgun diet. Probably not one percent of physicians prescribe the quantity of food their patients should take.

Nevertheless the work of the past twenty years has given us such definite information as to food values that we are quite as well prepared to prescribe foods quantitatively as we are to prescribe drugs. The object of food is the preservation of the normal body-heat, and if no food is taken, the heat is sustained by the oxidation of the tissues.

"For years we have fed our typhoid-fever patients on an empiric diet of milk, 40 ounces, beef tea, 40 ounces—less than 1000 calories—when the body was losing at least 2000. That a fat person who has calories to spare should be placed on the same diet as the thin one who has none, is absurd, and degenerative lesions are necessitated in the case of the latter."

"Chittenden has shown that an obese man can be fed on a diet equal to two-thirds of his daily loss without any harm."

"The loss of body-weight equal to the 1500 calories *per diem* can not be replaced by an equal food allowance. Losses occur in the intermolecular combination which demand a larger intake. The question is, How much? Two methods are available: the observation of the general experience of men, and experimentation admitting of exact measurement of the minimum food supply."

The estimates of necessary food supplies varied from 2800 to 3100 calories in twenty-four hours, until Chittenden began his remarkable experiments. He reduced the proteids to 118 Grams, and the total food to a calorie-value of 28 per kilo, or 1600 calories a day; and, yet, after a short period of adjustment lost neither weight nor strength. He found this applied to men in all walks of life, of every age and occupation, and up to the present his conclusions have not been refuted.

Dr. Power does not agree with the idea that natural food cravings must inevitably be right.

A popular method is to calculate the required calories on the basis of the weight, the accepted formula being 16 calories to the pound. But if the patient is far above or below the normal weight, this does not apply: it is too much for the fat man, too little for the lean.

Dr. Power's rule is this: Allow 2000 calories for five feet of height, and add 100 calories for each inch in excess. This closely approximates Rubner's tables. If the patient is bedridden, 25 percent should be deducted from that amount; if at severe labor, 25 percent is added.

The application of this rule to actual conditions, however, is difficult. While we may calculate the fat, proteid, etc., present in any special food, and if we have plenty of time and some knowledge of chemistry and cookery, we can calculate what will be present when ready for consumption, and in this way we may fairly approximate. The directions must be given in terms the patients or their attendants readily understand.

Dr. Power has calculated the following table, giving the weights and values of ordinary food portions.

COOKED FOODS	Per oz.	CALORIE VALUE		Portion
		Per average meal	Per oz.	
Olive oil	200	$\frac{1}{2}$	100	100
Butter	200	$\frac{1}{2}$	150	150
Bacon	150	1	150	150
Ham				
Sugar	120	1	120	120
Crackers	110	2	220	220
Cake	110	2	220	220
Cheese	110	1	120	120
Meats	90	4	360	360
Toast	90	2	180	180
Dates or figs	90	1	90	90
Bread	80	2	160	160
Eggs	80	2	160	160
Stewed dried fruit	80	2	160	160
Sardines	80	2	160	160
Pies and puddings	50	4	200	200
Poultry and game	50	4	200	200
Cream	50	2	100	100
Potatoes	30	1 large	120	120
Beans	30	2 oz.	60	60
Rice	30	4	120	120
Green peas	30	4	120	120
Hominy, macaroni, noodles	30	4	120	120
White fish and shell-fish	25	4	100	100
Milk	20	10	200	200

Note the average ounce value is 80 cubic centimeters.

Note the average portion value is 100 cubic centimeters.

Plain soups, green vegetables, and fresh fruits have flavoring and chemical properties, but so little nutritive value that their presence in a dietary need not be considered.

With such a list we can easily order a dietary to suit the case.

Taking the patient's height, we put on 2000 calories for five feet, and as many hundreds as there are inches in excess; then divide the number by 160, and we have the number of meal portions to be taken each day. These should be distributed as the judgment of the physician may suggest.

Another method of finding the daily number of meal portions for adults of normal weight is, to divide the weight by 10, the answer being the number of meal portions for one day.

In the discussion, Dr. Power replied to a question on vegetarian diet by saying that the minimum of 1500 calories per day could not be diminished without tissue loss. Many of these crank dietaries make up at one end what they are deficient of at another. While green vegetables and raw fruit provide so little nourishment that they may be left out of calculation, the natural-food fanatics really maintain themselves on nuts, whose oil-content gives them an unusually high calorie-value.

In a general way, the appetite demands little of the foods that have a higher calorie value, such as butter and sugar.

This is one of the most practically useful papers which has appeared in the medical journals for years. Of course it is only the preliminary, but it is the most important preliminary; in fact, Dr. Power furnishes a foundation on which we can build with security.

The questions remain as to the appetite of the patient and his capacity of digestion. It is still a serious problem as to how much of the food put in the stomach of a typhoid-fever patient can really be digested, assimilated and absorbed, considering the fact that the intestinal mucosa, whence the supply reaches the thoracic duct, is more or less disabled during the course of this malady.

PROGRESS OF THE ACTIVE-PRINCIPLE IDEA

It is evident that manufacturing chemists are awaking to the importance of the active-principle idea. Throughout the field there is an increasing tendency to leave out the inert portions of remedies, concentrating the really valuable parts into small bulk, facilitating the administration and retention of the doses, and securing prompter and more certain action. In one of our exchanges we note that arrheol is being energetically pushed, as affording the virtues of sandalwood with the advantages above noted.

In a recent edition of *Therapeutic Medicine*, Engel-Bey contributes an exceedingly interesting paper on the treatment of leprosy, especially with antileprol. This agent represents an effort to apply the active-principle idea to chaulmoogra oil. It has long been known that decidedly favorable results have been secured by the administration of that remedy in leprosy, only the difficulty has been to induce the patient's stomach to tolerate the large doses of oil which are necessary, for such a length of time as might be required to effect a cure. Incidentally, this is exactly the position in which the treatment of rheumatism by oil of wintergreen was found, until the chemists secured salicylic acid from this oil and the era of the salicylates commenced.

Antileprol is not the active principle of chaulmoogra oil, but merely a purified preparation of it. The process is thus described: The oil is first saponified and then the selected acids extracted. The resulting acid mixture is freed from its ill-smelling constituents and converted, by esterization, into low alkyl esters. The latter are liberated, in a pure neutral form, by distillation, the result being a clear, slightly odorous but almost tasteless liquid.

Dr. Engel-Bey, after two years' experiment, declares that antileprol possesses all the curative powers of chaulmoogra oil, beside being much better borne by the stomach and more easily administered in doses ascending to the maximum.

A successful man is one who has tried, not cried; who has worked, not dodged; who has shouldered responsibility, not evaded it; who has gotten under the burden, not merely stood off, looking on, giving advice and philosophizing on the situation.—Elbert Hubbard.

REPORTING VENEREAL DISEASES

In *The Utah Medical Journal*, Frederic Clift of Salt Lake City City contributes an editorial, in which he asks whether syphilis is a contagious disease; and if it is, then why it should not be reported as well as other contagious maladies?

The law specifies certain contagious or infectious diseases by name, but it does not follow that those which are not specifically named should be omitted. If this were the case, the powers of the boards of health would be so limited as to render them useless. For instance, when bubonic plague invaded the community, it certainly would be the duty of the health-board to combat it and to require the reporting of all cases, even were it not distinctly named in the ordinances.

In California the State Board has notified local Boards that after January 1, of this year, syphilis and gonorrhea shall be reportable diseases like other infectious maladies. Were this to be done generally, there is no question but that a step would be taken toward bringing these diseases threatening our social fabric under legal control and lessening their frequency.

However, this would not be the first effect of such a regulation. That rather

would be the immediate and sudden cessation of applications to medical men on the part of the victims of these diseases. Under those conditions the druggists would reap an even bigger harvest from their treatment than they do at present, and irregulars of every description who either might not legally be bound to report cases, or at all events would fail to do so, would experience an instant increase in their practice from this source.

Undoubtedly, for a time the reporting of such affections would occasion widespread alarm and disaster in social circles, still, it would not be long before that condition would cure itself. Certainly, enormous benefits would result if, in connection with this matter of reports, such measures could be taken as to compel the victims of venereal diseases to resort to legally qualified practitioners.

Every operating gynecologist will tell of what a large share of his work is due to the gonococcus; and in most instances it has been innocently acquired by the victim—the woman. The reason for this is the imperfect and ineffective treatment of the trouble in the man; and since the vast majority of these patients apply, not to the physician, but to the druggist for relief, at his door the lamentable consequences must be laid.

Until such measures can be taken as will compel a resort to legally qualified physicians, the result of putting syphilis and gonorrhea upon the list of reportable contagious diseases will surely be that herein predicted—the disappearance of all such cases from the consulting room of the physician.

TIMELY HINTS ON THE CONSERVATION OF HEALTH AND CHILD-LIFE

Samuel G. Dixon, Commissioner of Health of Pennsylvania, in his pamphlet on "Conservation of Child-Life in Pennsylvania," supplies enough good food for thought to keep the journals in editorials for several years, and a few examples may be quoted. Thus we read:

"What are we doing for the healthful development of our people? To begin with, are we doing anything to prevent the chronic sick from marrying?"

"A friend happened in my office, saying as he stretched out his trembling hand, 'You hit me hard!' I was worried and perplexed until he added: 'I lost my son. He was doing so well at college, I thought he could pull through until vacation, when he was to take a long sea trip, but I kept him at it too long.'

"Boys, like colts, should be educated to fill the positions in life they are fitted for, both mentally and physically. The horse-breeder who should train a heavy Shire-colt for the race course would not commit a more laughable, or perhaps I should rather say pitiable, error than the educator who endeavors to stock the mind of a boy whose brain is alive to the stirrings of mechanical inventions, with Latin roots."

"If a child who learns easily and is ambitious is found to be losing flesh, vitality and color, the alarm should be at once taken, and that child should be put out to pasture."

One of the circulars sent out by this Board is entitled, "Wipe out Typhoid Fever by Killing the Germs in the Bedpan." I never have understood why Dr. Dixon fails to comprehend the importance of germs in the alimentary canal and the necessity of checking their multiplication.

"A school building may be inspected by any person of average intelligence and education. A child can be inspected only by an educated physician."

"Our children belong only to us,' say some parents. 'No,' replies the commonwealth, 'they belong in part to you and in part to the whole people.'"

"By medical inspection defects of vision and hearing, deformities, faulty nutrition, incipient tuberculosis, may be detected in time to save much suffering, great waste, and many lives."

"The medical inspector under no circumstances advises as to the selection of a physician, nor does he communicate with the family of a pupil personally, all reports being made directly from the department."

"No article of food is so essential to the healthy development of a growing child as milk."

In the spring of 1909, out of 15,992 dairies inspected only 3212 proved in thoroughly sanitary condition. In 99 typhoid

fever was reported to be present on the premises, and scarlet-fever in 71.

"A decrease of the typhoid-fever death-rate from 56.6 out of every 100,000 population in 1906, to 23.9 in 1909, is a sufficient evidence of the good results already achieved in this direction."

"By the use of diphtheria antitoxin, the Department has been instrumental in saving 6968 lives, and preventing contagion and immense loss of life in several thousand other cases."

"Starting with the cradle, if not earlier, our aim is to conduct the growing citizens of the State through the perils which environ their earlier years, acting in harmony with the school authorities as the advisor and mentor of their parents in all matters pertaining to their healthful development, until they are ready to assume their places as healthy and vigorous as well as properly educated members of society."

Many similar sensible paragraphs might be cited, but the foregoing must suffice for the present.

Hubbard says, "Cultivate charm of manner." That is good advice for the young doctor. Remember that the finest charm has its roots deeply set in consideration for the comfort and sensibilities of others, in real appreciation and sympathy, and has no limitations in sex, class or station. Be courteous to every human creature.

DISINFECTANT AND ANTISEPTIC VALUE OF IODINE

In *The New York Medical Journal*, Major Woodbury contributes an interesting paper on the application of tincture of iodine as an antiseptic, expressing himself as follows:

"The writer believes that iodine is the long-desired ideal disinfectant and antiseptic. It is cheap, easily obtainable, can be carried in small bulk, is efficient in high dilution, does not damage tissue, even where its vitality is reduced by traumatism or infection. It has invariably been successful as a germicide under all conditions when the drug and the germ have been brought together; and though it has great powers of tissue penetration, the writer has yet to see a case of poisoning, even when it was mopped in full strength on the peritoneum and in the parturient uterus."

Dr. Woodbury uses this agent to disinfect the area of operation, without previous preparation, as well as to sterilize instruments and the surgeon's hands. Instruments, however, should preferably be boiled, inasmuch as iodine tarnishes them and affects the cutting edge.

The author further claims that the tincture of iodine is the most valuable drug the railroad or military surgeon can have. He always takes a quart of it (two pint bottles) when serving with troops in the field. "An open prairie or a nipa-thatched shack will show as good results, provided you have a good surgeon and tincture of iodine, as does the finest marble-lined operating pavilion, served by the most scrupulous followers of Lister."

To Major Woodbury is justly entitled the honor of having been the first to introduce to the profession this valuable application of iodine. However, Major Woodbury's fine therapeutic discrimination is not entirely to be credited to himself, but in part at least to heredity, from his distinguished father, Prof. Frank Woodbury of Philadelphia.

WHAT IS MEANT BY REFLEX?

At a meeting of the Medical Association of the City of Greater New York, held December 19, 1910, Dr. Edward D. Fisher undertook to tell the meaning of "reflex." He did not succeed very well in imparting an intelligible idea of the meaning ascribed to this term. He asserted that all action was reflex unless volitional. We always had, he said, the afferent irritation, the receptive center and the efferent impulse. Pain was not necessarily reflex, but might be "referred." The gastric crises were not properly reflex, for here the reflex was lost. The term "referred" gave a clearer conception of the situation.

The term reflex as usually employed signifies the presence of disease at one point and the presence of symptoms at another. It is generally inferred that the irritation at the point of trouble is carried thence to the nerve-centers, and along one or another nerve path to another point, where local symptoms are manifested. Just why this

should be has never been satisfactorily explained.

When there is degeneration of the roots of nerves, with trophic manifestations at their peripheric distribution areas, that is not at all a manifestation of reflex irritation, for the connection is direct. If vomiting results from the presence of a foreign body in the external auditory meatus, we justly term it reflex. But why does the reflex irritation travel by preference along this route, and why does it not always choose the same route?

The most plausible hypothesis as yet advanced in explanation of such phenomena is that which attributes them to a deficiency of the relative supply of the vital force.

Take the most common source of reflexes, the imperfection of the visual apparatus: From the continued straining of a congenitally imperfect eye, it acquires the power of attracting to itself an undue proportion of the general stock of vital force, to enable it to perform the functions demanded. In the case of the eye, these are vastly greater than would be required of that organ in the state of nature we generally assume as the normal standard of function. It has been estimated that the civilized eye is called upon for about 2000 times more service than the eye of the savage. No eye is mathematically perfect; and the strain is multiplied by this excessive demand for accommodation, so that any defect of this part is enormously increased as to its effect in withdrawing to itself the vital force, and engendering reflex irritations at other points. Where these may be depends on that other factor, the relative capacity to retain the share of force.

There is in every human being a point of least resistance, and this point is most easily robbed of its share of force and displays the deficiency in local irritation. Hence the same imperfection of ocular accommodation may display itself in quite a variety of ways in different individuals, each manifesting local symptoms at what happens to be his especial *locus resistentiae minoris*.

Whether this explanation is substantially a correct view of the pathologic conditions, or is to be considered a mere schematic representation, it affords an excellent working

hypothesis for the basing of our therapeutics. It enlightens us on the dangers of taking the mere symptoms as our guide, without physical examination and the aid of the laboratory; since symptoms apparently identical may proceed from widely different maladies.

This presentation develops in the physician the habit of going to the root of things and ascertaining the true cause of the indisposition he is called to treat—a habit not so general as it should be, by any means. Sometimes it aids directly in the application of therapeutic measures, since we may transmit back along the reflex nerve paths the effect of medicinal remedies. It brings the general practitioner in closer touch with the specialist, and corrects the latter's partial and fragmentary view of the situation, while allowing him full credit for what he really finds ailing in his special part of the anatomy.

Take this view of reflex irritation, together with the influence of fecal toxemia and the measurement of the capabilities of the various eliminative apparatus, and we can see how the physician who employs them as the fundamental principles of his practical work possesses advantages whose value can scarcely be overestimated. He works from the inside of a circle instead of from the outside, for he bases his management of any case on a demand for sound physiology, and from that point the rest is easy enough. Add to these the effects of a correct hygiene and a carefully regulated nutrition, and the influence of such drugs as he perceives to be indicated is enhanced beyond the possibilities of any remedies directed without these fundamentals being first considered.

If the whole of history is in one man, it is all to be explained from individual experience. —Emerson.

THE CANADIAN RECIPROCITY TREATY AND THE PAPER TRADE

Mr. John Norris states that more than six million dollars is the burden imposed by the existing tariff as applied to the Canadian provinces, and he claims that the paper makers are systematically starving the market, the entire stock of paper on hand at the beginning of this year being less than an eight-day supply to the newspapers of the country, while in December, 1910, they ex-

ported more print paper than Canada shipped to us. The larger paper companies reduced their production to thirty-five percent of their normal output.

Meanwhile the wrapping-paper pool advanced prices to the extent of five million dollars per annum, pleaded guilty in the United States Court, and paid a fine. The box pool also pleaded guilty and paid a fine. The West Virginia Pulp and Paper Company is increasing its capital stock to twenty million dollars, and other book-paper mills are expected to follow.

Mr. Norris' statements are exceedingly interesting. In the meantime one welcome result of the reciprocity treaty will be to lessen the destruction of our forests by bringing in Canadian wood for the purpose of paper making. The extent of this demand may be shown by the fact, asserted by Mr. Norris, that last year we bought abroad pulp-wood and pulp to the extent of 1,716,000 cords, to make paper in American mills. We pay nearly twenty million dollars to foreigners for wood and pulp to keep American mills going.

STRYCHNINE AND ITS COMBINATIONS

Men give *nux vomica* in paralyses without looking to their cause, and in this way induce discharges without reflecting that they are exhausting what little remains of the nervous excitability. Matteucci proved that these shocks were detetanizant, so that it is rather in tonic or painful spasm that strychnine should be employed. Hence its good effects in neuralgias. If congestion is present, aconitine should be added. When there is a disharmony or a rupture of the vital equilibrium, hyoscyamine should also be employed. This combination is especially useful in esophagismus, and in dysuria, where the dynamic obstacle can only be removed by the two, strychnine acting upon the longitudinal and hyoscyamine upon the circular fibers.

But it is especially to restore the general tone of the economy that strychnine is useful. Place the end of a finger in the ear—the acuteness of the sound heard will depend on your force or feebleness at the moment. It will be low if fasting, acute after a full

meal. Take a fair dose of strychnine and it will become hyperacute. We are then a vibrating machine, a sort of Eolian harp, and the impressions coming upon us from without provoke vibrations according to the tension of our fibers. When this is too great the vibration is painful, and the contrary is the case when the cords are relaxed. The machine must then be tuned. Here is the ancient doctrine of *strictum* and *laxum*.

We gather from these facts some valuable therapeutic indications. Quinine in overdoses causes ringing in the ears. Strychnine is the vital key, since by it we can attune the diapason necessary for the harmony of the organic functions. Morally and physically, such tuning up results from strychnine.

Strychnine must not be given in cerebral softening. Magendie remarked that the effects of strychnine were more marked on a paralyzed side. In ataxy we have not marked any good effect from strychnine, because there is a sclerosis with atrophy of the nervous substance. It finds its place when we wish to stimulate either sensation or motion, the former returning first in paralyzed parts—an indication to persevere with the remedy. Some local palsies are better modified by strychnine than others; for example those of the eye and face. Gubler observed that many amblyopias are benefited by strychnine, probably those dependent upon atony of the muscles of accommodation. Strychnine is serviceable in tremors, alcoholic or saturnine, if there is no nervous lesion.

Whenever strychnine is to be continued for a long time, the dose should not exceed 1-12 to 1-10 grain a day, gradually increased to 1-6 grain. The hypophosphite of strychnine is especially useful, as phosphorus is a needed nerve reconstructive. Fats should also be given, especially those from fish.

In acute cases—in the nervous disturbance preceding grand inflammations—strychnine should be given from the beginning, *coup sur coup*; 1-134 grain every quarter-hour, then every half-hour until reaction is established, as shown by pulse and temperature. There may be need also for aconitine, veratrine, digitalin, even for venesection. The life of the patient may depend on this treatment. In traumatism it should always be

at hand; so in algid fevers, cholera or pernicious fevers. Unless we begin by arousing vitality it is clear that absorption can not take place, and the patient will perish in a mild asphyxia, when his body dries up and passes into a cadaveric state in the midst of the most atrocious cramp-like pains. Strychnine and hyoscyamine given together render the most signal service in these cases. Give 1-134 grain of each every quarter hour. At the same time it is necessary to restore heat to the skin by energetic friction, assuaging thirst by little pellets of ice. Reaction once established, a new attack may be prevented by adding quinine hydroferrocyanide to the strychnine, ceasing the two only when pulse and temperature have returned to normal.

Stimulation is not obtained by burning the mucosa with volatile oils. This is an expenditure of force, adding its exhaustion to the others. But rubifacients are often the only resource left to the practitioner.

Castro says: Strychnine, beside the excitomotor properties generally recognized, possesses also that of destroying the intolerance for certain indispensable medicaments, which can not be replaced, induced in some by idiosyncrasy, by the special quality of the disease or by the insistence necessary in the administration of medicines. This induction of tolerance does not annul or modify the therapeutic properties of the substances constituting the principal medication. There are four indispensable medicaments: strychnine, aconitine, veratrine and hyoscyamine; and the tolerance production of strychnine is to be noted especially as related to the three others. If strychnine is administered with either of them, the characteristic effects of the latter will be induced by smaller doses than when strychnine is not given.

It's these seemingly superfluous efforts that count—the work you do for the love of working, not what you do within working hours and merely because you are paid for it.—Cushman K. Davis.

THOSE AWFUL GALENICS

I cannot comprehend why people stick to the galenics when they ought to know better. The faults of this class of remedial agents have been sufficiently told, and every-

body should know them. Doctors also know that they do not have to use galenical preparations, but that there are better ones to be had; yet, so strong is the habit that they continue in the same old blundering way.

There is absolutely no answer to be made to the objections to these preparations. Granted that jaborandi, hyoscyamus, gelsemium and opium do contain, respectively, pilocarpine, hyoscyne, gelseminine, and morphine, still, no two specimens contain exactly the same proportions; so that, unless they are assayed, we always have to stop for experimenting to find out how strong our preparation will turn out to be. Then, the strength never remains the same from one day to another, because from evaporation of the menstruum and decomposition of the active principles the actual strength varies continuously. And, still further, even with the assayed preparations, we have to experiment to find out what each particular lot will do.

But the worst of it is that, beside what we want, these and nearly all other vegetable drugs contain other constituents which we do not want. Thus, jaborandi contains pilocarpine, which causes sweating; but it also contains jaborine, which stops sweating. Hyoscyamus contains hyoscyne, which induces sleep; but it also contains hyoscyamine, which banishes sleep. Gelsemium contains gelseminine, which sedates the spinal cord; but it also contains gelsemine, which stimulates the spinal cord. Opium contains morphine, which does what we all know about; but it also contains thebaine and a whole lot of other active principles, which do lots of other things, some of which we know and others we do not. Uva ursi contains arbutin, which soothes the bladder most beautifully; but it also contains a whole lot more tannic acid, which does plenty of things to which we very decidedly object.

And so we go through the whole of our materia medica. There is not a solitary article in it which we can use in the form of the galenic preparations, with full certainty of just what it is going to do, and how much of that same thing it is going to do.

The simple truth is that many of us have accustomed ourselves to these things, have

learned to allow for them, and would no more know how to get along without them than the woman did after she had a tumor removed. She had been so used to grumbling about that tumor, to nursing it, considering it, that she had practically regulated her entire life by it, and missed the blamed thing when it was removed.

The principal difficulty is that the physician does not realize what a pleasure the practice of medicine becomes when one knows exactly what his medicines are going to do.

Emerson says, "A great institution is the lengthened shadow of one man." That is, one man's spirit runs through and pervades every successful institution. He keys the symphony.—Elbert Hubbard. And what is true of the institution may be true of the community—your community. If you sufficiently develop the strength and sweetness of your character it will be photographed upon the lives of every man and woman with whom you come in contact.

PULMONARY EDEMA

Dr. Haven Emerson, in *The Archives of Internal Medicine*, calls attention to some observations made by him as to the application of artificial respiration in the treatment of edema of the lungs. The suggestion is based upon experiments with adrenalin, which was given to animals in increasing doses until edema of the lungs had been induced. Under the use of massive doses of this remedy respiratory movements are exaggerated, later becoming feeble and spasmodic, and the animal dies of asphyxia due to flooding of the air-spaces of the lungs with blood-serum. We quote Dr. Emerson as follows:

"If, when we find respiration showing definite signs of beginning asphyxia, when the veins are becoming distended and deepened in color, cardiac insufficiency is established and the incompetency is increasing, when we can hear moist râles over the lungs, and when we know that cardiac insufficiency is established and the incompetency is increasing, we then apply artificial respiration, through the tracheotomy tube, gently distending the lungs and allowing them to collapse with or without suction, we shall find presently an amelioration in the animal's condition.

"When the artificial respiration is discontinued, after about half an hour the

animal is able to breathe normally and shows none of the signs of insufficient circulation or respiration. The effect of the adrenalin has worn off, the heart-muscle has recovered from its acute overloading, the pulmonary circuit is no longer engorged with regurgitated blood, and to all intents and purposes the heart and lungs are again performing their functions normally.

"With a heart just able to maintain its competence under favorable conditions, even if it is not the seat of myocardial degeneration, insufficiency is easily precipitated and pulmonary edema is likely to be developed unless the failing heart action is of very brief duration. Under such conditions as I have above described, I believe it would be a valuable aid to the necessary modification if artificial respiratory movements were used.

"I think such treatment would be indicated whenever the edema and cardiac incompetence are of sudden development and are due to causes which are likely to prove of brief duration or can be removed by appropriate treatment. Edema, when due to cardiac failure in the course of pneumonia or appearing as the inevitable terminal feature of a chronic endocarditis, could not be expected to respond to such temporary relief as artificial respiration would offer. Moreover, I hope I shall not be misunderstood as advocating forced respiration by intubation or tracheotomy, for I certainly think such measures would be quite unjustifiable. My belief, based on experimental observations, is that artificial respiratory movements, directed to establishing a rhythmical expansion and contraction of the thorax, are worthy of clinical trial in cases of acute cardiac insufficiency accompanied by edema of the lungs."

DON'T BE CONTENTED

Poets have sung and philosophers have philosophized over the beauties of contentment. From our earliest childhood its desirability has been dinged into our ears, and every attempt at altering our conditions for the better has been squelched by the wisecracks, and their maxims that teach one

to be satisfied with his life and to make no attempt to improve it.

Nevertheless, all progress is founded primarily on discontent. As it gets cool toward morning in these winter nights, is it better to lie still and shiver, or get up and close the window and turn on the heat? If the income is insufficient, why not use one's wits to earn more?

This is the day of the kicker, of the grumbler. The man who does not like things as they are, and kicks about it, is more likely to find an improvement coming than the man who meekly accepts what comes to him and lets it go at that, and thereby only encourages others to make further encroachments upon him.

We preach the gospel of discontent, of constant striving for something better than we now possess. Nothing is good enough if better can be imagined.

And, truly, the world grows better. Time was, in the recollection of those not yet very aged, when it was by no means uncommon to see men and women drunk on the streets. There may be as much liquor drunk as before, but people at least keep it out of sight. Reading Fielding and Smollett's novels, we conclude that in their day it was considered somewhat disgraceful for a man to be so sober as to go to bed without assistance. Certainly nothing of the kind is tolerated today in polite society.

When the honest old farmer went to the legislature, and, after two years spent there on a salary of eight hundred dollars a year while expenses were fifteen hundred, came home with ten or twenty thousand dollars saved up, the incident was productive of hilarity rather than of reprobation. The election of a United States senator had much to do with our bucolic friend's prosperity; and we knew it, but took it as a matter of course. Nowadays we will not stand for anything of the sort.

Not many years ago, when consulted by a patient suffering from vesical disease, we simply hunted through our materia medica, noted the five or six remedies supposed to influence favorably the human bladder, and prescribed them, trustfully hoping that something or other in the conglomerate mess would do good. Now we select arbutin as

the beneficial agent in all, and give it alone.

In therapeutics we have progressed to the point where there is a loud and deep demand that the physician, in prescribing medicines, shall know why he prescribes them and what they are going to do. When a man dies of ileus, we no longer saddle it upon the Almighty as one of His mysterious dispensations, but we ask why the surgeon was not called in aid in good time.

Diagnosis fifty years ago was often a guess; now we demand that all the resources of physical examination, all of the aid which the laboratory can give us, shall be brought to bear on the task of ascertaining exactly what is the disorder in any case.

Truly, nothing is good enough if better can be obtained. The man who stands still, content with his acquisitions, is by that very fact a back number. Nevertheless, the new is not necessarily the best, and there often are values in what we give up that we can ill afford to lose.

THE SYNERGISM OF DRUGS

Some years ago the writer announced, from his studies, that when hyoscine and morphine were administered simultaneously, the anesthetic and analgesant effect of the combination was greater than when proportionate doses of either remedy were given alone. This he illustrated schematically by saying that, if the effect of the morphine were calculated at thirty, the hyoscine at twenty, the effect of the combination, instead of equaling fifty, was something more like eighty or ninety. This conclusion, based entirely on clinical study, was received with ridicule.

The following quotation from an article by Leipoldt in *The Lancet*, February 11 (p. 369), is somewhat significant:

"A few points stand out clearly, and it may not be without interest to draw attention to Burgi's recent elaborate series of experiments in which a large number of combinations were tested. These conclusions have not been challenged, on the contrary, more recent work by Italian critics seems to confirm Burgi's work in substance. He found, what was known already clinically,

that two narcotics introduced simultaneously or shortly after each other have a much more powerful effect than when a total quantity of one narcotic, equivalent in strength to the combination, is administered.

"Madelung, working with scopolomorphine, found that this combination very powerfully increased the anesthetic effect of ether. Neu's and Rocchi's results were similar with regard to an atropine-morphine combination; and as early as 1880, Surmav pointed out that a preliminary dose of chloral enabled the anesthetist to use a much smaller quantity of ether. Rave in America and Franck of Bordeaux reported similarly with regard to other combinations. Much more recently Wolffsohn has laid stress on the important summative effects of small quantities of a narcotic drug, not in themselves sufficient to produce any appreciable degree of narcosis, influencing the rapidity of action of general anesthetics."

I cannot praise a fugitive and cloistered virtue, unexercised and unbreathed, that never sallies out and seeks her adversary, but slinks out of the race where that immortal garland is to be run for, not without dust and heat.—Milton.

STATUS OF THE MONGOLIAN PLAGUE

At the Edinburgh Medico-Chirurgical Society meeting, held January 11, J. C. Thompson presented a paper on "The Present Treatment of Plague." He reviewed the well-known prophylactic measures, including the rapid extermination of possibly infected rats; the destruction of fleas; inoculation with Haffkine's prophylactic serum of persons possibly exposed to the bites of infected fleas; the same arrangements for disinfection as in typhoid fever, except in cases of a pneumonic type, which required the most complete measures possible; and careful nursing.

The tendency to heart failure renders the recumbent position essential while acute symptoms last. Delirious patients must be restrained mechanically. The bladder must be attended to. The food should be bland, liquid, and given in small quantities at frequent intervals until the acute symptoms subside. Water should be freely given or even forced on patients. The use of cardiac stimulants should be a routine practice in

all cases from the very first, since great prostration is manifested within a few hours from the outbreak. Some symptoms that may prove urgent are constipation, diarrhea, high fever, headache, delirium, insomnia, hemorrhage.

The consensus of opinion is against the excision of the bubo. Many buboes in those who recovered resolved without suppuration. Antiseptic injections about the bubo are of no value. Sometimes there might be seen on a limb, below the bubo, a papule with an inflamed base and a clear vesicle, the contents of which swarmed with plague bacilli. Destruction of this papule by deep cauterization with phenol was usually followed by abortion of the disease.

The indolent ulcers and so-called carbuncles were manifestations of general depression, and their treatment was based on general principles. The introduction of phenol, 80 grains a day, in 204 cases, seemed of little value. In another epidemic, 144 grains daily, in a series of 143 cases, gave a mortality of one-half the preceding; but this ratio obtained in the second half of the epidemic, when the disease was normally less virulent. In the earlier half of the epidemic oil of cinnamon was used, but it proved valueless. Further experience confirmed the view that phenol was of undoubted value.

Serum treatment afforded decidedly unequal results in the hands of different practitioners. Experiments in India seemed to indicate that mortality was little affected by the use of any serum, but the course of the malady was favorably influenced when serum was administered on the first day of the attack, the Versin-Roux serum of the Pasteur Institute giving the best results.

Dr. Thompson's summing up of the present condition of the treatment demonstrated that it is exceedingly unsatisfactory, and that the chief reliance must still be placed on careful nursing and general management.

It may be said here that the principles of treatment applicable in all infectious fevers should be followed in this perplexing visitation. The bowels are first emptied with calomel, saline laxatives, and colonic flushes; then disinfected by the free use of the sulphocarbolates. The leukocytes should be reinforced and energized by nuclein in full doses,

hypodermically or intravenously administered. The infectious element must be opposed by saturation with calcium sulphide.

As to the variant treatment, constipation demands the morning laxative saline; diarrhea calls for the sulphocarbolates; fever usually requires the dosimetric trial of aconitine, digitalin and strychnine arsenate. Headache subsides under these, but if not, gelseminine is the remedy; this also for delirium and insomnia. Hemorrhages require atropine or hydrastinine. The debility may demand strychnine to be pushed, beside a carefully arranged dietary.

REFORM AND TRUSTS

Our editorial on "Reform," in the February issue of this journal, has elicited a good deal of interesting comment. One correspondent in particular calls our attention to the fact that the trust is a necessary outgrowth of the development of social conditions in this country. We have passed the pioneer stage. The pioneer and his virtues are things of the past. Density of population has increased until we crowd each other and elbow-room grows scarce. Just in proportion as we approximate the crowded conditions of Europe, so the organization which distinguishes European countries is forced upon us. We can no longer afford to waste our efforts in useless competition.

Take the Oil Trust, for instance, as the most heartily detested of all the brood. It has nevertheless given the whole country a standard quality of oil, and has, by the methods made possible through its monopoly of the business, instituted innumerable savings and utilized innumerable products that would otherwise have remained as worthless waste; beside lowering the general level of prices of that line of products, not possible under the small-scale system.

Organization eliminates enormous expenses previously wasted in competition. It reduces the cost of necessities, and sets free numberless employees whose energies may be utilized in other directions.

There is always a place where labor is needed. The balance between the production of food and the mouths that consume it is always an exact one. There is never a

surplus of food. The development of the resources of our own and other countries furnishes employment for untold billions of capital, so that which is rendered unnecessary by the aggregation of industries into trusts still finds employment in other directions.

Of capital and of labor there never is a surplus. Millions of acres of land in our own country, in nearly every state of the Union, still await the advent of the plow.

These truths would be better understood and more generally admitted, were it not that they are obscured by the greed manifested by the trusts—needlessly, we believe. It seems possible that, impatient because the real benefits afforded by organization are not at once appreciated and due credit given to the organizers, they hastily assume that the public is made content by nothing; and since they are sure to be blamed, they might as well get out of the job whatever is possible—exactng the limit the market will bear.

ON VACCINE THERAPY

In *The Practitioner* for September, last year, Dr. J. Horder, of the St. Bartholomew Hospital in London, raises several notable objections to the indiscriminate administration and appreciation of vaccine treatment as it is at present in vogue in England. As a clinician he is convinced of the great value of this mode of treatment in many cases, but he insists that we lack as yet every objective proof supported by statistical evidences for the superiority of this method over other methods which had hitherto been employed. He emphasizes among other things the danger when the patient is treated by a theoretical bacteriologist instead of by a physician with clinical experience.

Horder deplors the fact that it is so widely customary no longer to ask what condition we are treating, but only to inquire after the bacillus that may be present, and that a diagnosis of bacillus coli may be made, for instance, where we are dealing with a retroperitoneal sarcoma. He admits the saying, "The physician of the future will be an immunizator," with the provision that the immunizator must not cease to be a physician.

It is strange, but only too true, that as a class physicians, like the Athenians of old,

never cease to chase after new idols, and to worship fetishes and fads, only too often to the entire exclusion of all conservative and common-sense reasoning. If a certain cause has in one instance been productive of a certain effect, we are altogether too prone to generalize, and we are all too apt to say that if a equals m and perhaps b equals m , x must equal m also, without determining whether $c, d, e, f, g, h, i, j, k, l$ equal m without drawing at least a probable conclusion as to the likelihood of and possibility for generalization.

We can say that the treatment of all sorts of infectious conditions by means of vaccines, whether heterogenic or autovaccines, has become a fad to an undue extent. In the conditions in which the principles of immunity are involved for the institution of etiologic treatment, it is more than almost anywhere else necessary that these problems should be studied most carefully and that we should not act blindly or hastily. Vaccines and bacterins as well as culture extracts are not only very powerful remedies, but they are two-edged swords, capable of producing woe as well as weal, capable of doing serious harm as well as of doing good.

It is to be deplored that the biologic remedies are employed indiscriminately, and that the old remedies, well established as they are, and well prepared in their latest and frequently definite and positive form, are put aside while we forget that by means of these remedies we have been enabled, hitherto, to stimulate the organism to accomplish the same work which it is sometimes whipped into doing by excessive doses of bacterins.

Drug treatment sets in motion certain biologic processes which alter the process of immunization in a manner much greater than we had ever a conception of. The study of drug effects has entered, under the impetus of biological and biochemical investigations, into a new phase, which will vindicate the important position which active and potent drugs have occupied for many years. We shall find out eventually that, however excellent bacterins and vaccines may be in their proper places, we very frequently can obtain the same results, at least as well and with less likelihood of doing harm, by the properly selected drug remedies.



The Active Treatment Of Pneumonia*

A Record of Experience with Two Hundred Cases

By W. C. WOLVERTON, M. D., Linton, North Dakota

EDITORIAL NOTE:—Dr. Wolverton lost only one case in one-hundred and forty-one patients treated for lobar pneumonia; only five out of fifty-nine who had bronchopneumonia. Results like these, so much out of the ordinary, must command attention, and certainly his ideas concerning the treatment of this dread disease deserve the closest study.

THERE are certainly few, if any, more important problems before the medical profession today than that of an effective treatment of pneumonia; especially in the face of recent statistics, which show that in Chicago, during the year 1910, pneumonia has caused the death of more persons than did tuberculosis, typhoid fever, diphtheria and scarlet-fever combined.

We are doing nothing toward the solution of this problem. We seem satisfied with depending upon the so-called "expectant treatment"—which amounts practically to doing nothing at all until forced to act—and expecting from 20 to 50 percent of our patients to die; an expectation quite generally realized when this so-called treatment is followed out.

We are told that "pneumonia is a self-limited process which runs a definite course, and is uninfluenced by any known method of treatment." But, Osler to the contrary notwithstanding, every country practitioner knows that much can be done to alleviate the suffering of all pneumonia patients, to ensure the recovery of almost all of them, shorten and mitigate the course in many cases, and, if the patients are seen early, to

jugulate or abort a considerable proportion of attacks.

My Experience With 200 Cases

During the past six years, the writer has treated two hundred cases of pneumonia, or, if you will, what would have been pneumonia had they been treated by the "expectant" plan. By the latter are meant those numerous cases which we all see, quite often, during the first, or congestive, stage, which is the time favorable for "jugulating" or "aborting" an attack.

Suppose a patient exhibits the following set of symptoms: Severe initial chill, following exposure; a sharp rise in temperature, of pulse and respiration; harrassing cough; lancinating pains in the lateral region of the chest; scanty, viscid, rusty (or blood) sputum; flushed face, often most marked on the affected side of the body; and physical signs of beginning consolidation of lung-tissue. If such a patient has not fully-developed pneumonia, how long will it be until he has it?

Of the 200 cases treated, 141 were of the lobar or croupous type, and the remaining 59 cases were those of bronchopneumonia. Of the entire 200 cases, 100 were males and 100 females; 23 occurred in infants under

*Read before the Sixth District Medical Society, Bismarck, N. D., Feb. 14, 1911.

1 year of age (bronchopneumonia); 20 were between 1 and 2 years of age (bronchopneumonia); 42 were between 2 and 5 years (mostly bronchopneumonia); 21 were between 5 and 10 years of age; 18 between 10 and 20 years; 23 between 20 and 30 years; 25 between 30 and 40 years; 12 between 40 and 50 years; 6 between 50 and 60 years; and 10 of the patients were over 60 years of age.

Of the 59 bronchopneumonia patients, 5 died—a mortality of a little less than 8.5 percent; of these 5 cases, 2 were less than 1 year old, and the other 3 were less than 2 years of age. One of the 5 fatal cases was that of an Indian infant, at Ft. Yates, moribund when first seen, and the child died within a few hours. Another of the fatal cases was that of a child which died of an attack of bronchopneumonia following shortly after a long siege of cholera infantum.

Of the 141 cases of lobar-pneumonia patients, only one died. This was a 40-year-old alcoholic who had safely passed the crisis and then, owing to foolish exposure, contracted a second attack.

As to the treatment employed, all these patients were treated actively from the start.

Management of Incipient Pneumonia

When seen within twenty-four hours after the initial chill, the first step is the administration of a quick-acting purgative; the writer likes especially a combination of from 65 mgm. to 20 cgm. each of calomel, jalapin and phenolphthalein. In many instances an enema is given while waiting for the purge to act. A clean gastrointestinal tract will do much in avoiding autotoxemia, and gives a clean mucosa from which medicinal remedies may be readily absorbed.

To relieve the pulmonary congestion, restore circulatory equilibrium, quiet the excited heart, lower the hypernormal temperature, and induce diaphoresis, veratrine and amorphous aconitine, in doses of 1-2 to 1 milligram (1-134 to 1-67 grain), each, dissolved in hot water, are given every fifteen minutes until a distinct impression is made upon the pulse-rate, the temperature begins to fall and the skin to become moist. The interval between doses is then lengthened to a half hour, and finally to one or two

hours, as necessary. The dose is small, given frequently to effect, and thereafter as the individual case may demand. The foregoing dosage is for the average adult.

In asthenic cases, these active remedies must be used more cautiously, and may be safeguarded by the addition of digitalin or strychnine. The combination of aconitine and veratrine with digitalin may seem like a therapeutic incompatibility; but Ehrlich's studies in selective cell action, in taking unto themselves such substances as they may require, helps to explain why this combination does work well in practice.

In giving aconitine and veratrine to children, it is well to add strychnine, and to follow Shaller's rule of dosage, viz.: in 24 teaspoonfuls of hot water, dissolve 1-2 milligram (1-134 grain) of each of the above-named alkaloids for each year of the child's age, plus an extra 1-2 milligram (1-134 grain) of each. Of this solution a teaspoonful is given at the intervals as stated for adults.

With no other treatment than the purge and the use of the defervescent remedies as outlined above, many cases may be jugulated, or "aborted," as you will, if seen early. Few cases so treated go to a typical crisis; most of them end by lysis in from three to six days. If the case is first seen after consolidation has taken place, we cannot hope to jugulate the disease; but the defervescent drugs may still be cautiously administered to advantage. This defervescent treatment is perfectly safe, if conducted as above described, and will give nothing but good results.

Local Measures Are of Value

However, there are many other measures which are of great value in the treatment of pneumonia. One of these is the application to the entire chest, by inunction, of a mixture of equal parts of guaiacol and camphorated olive oil, or equal parts of guaiacol, oil of eucalyptus and methyl salicylate, repeated every two to four hours. Another is the application of a cotton jacket, made by lining an ordinary undershirt with a thick layer of absorbent cotton, the latter held in place by a few stitches. After each application of the guaiacol mixture, profuse dia-

phoresis unfailingly takes place within fifteen or twenty minutes, with a fall in temperature; and the patient often speaks of experiencing a feeling of euphoria.

The cotton jacket does not impede respiratory movements, and is very agreeable to the patient. One precaution which must be observed in its use is, that during convalescence only a little of the cotton should be picked out from day to day, as a sudden removal of all of the cotton might result in a fresh attack.

Since the writer has begun the use of guaiacol inunctions, he has not lost a case either of lobar or bronchial pneumonia, and he believes that it is a remedy of exceeding value.

Remedies for the Cough

For the cough, a mixture of ammonium chloride, codeine or heroin, fluid extract of glycyrrhiza, and bitter-almond water is given from the start, this aiding in thinning and loosening the secretion and sedating the cough. This mixture also has the virtue of palatability, and even small children do not object to its taste. As soon as resolution begins, potassium iodide is added to the mixture.

Since the writer has repeatedly seen such excellent results from the external use of guaiacol, it has occurred to him that the addition of creosote carbonate to the foregoing cough mixture would be in the nature of an improvement, as creosote has such well-marked properties as a pulmonic antiseptic, while its carbonate is practically tasteless.

A refreshing draught, during an attack of pneumonia, is the old "potus imperialis," or cream of tartar lemonade. It aids excretion both by kidneys and bowel; and its cooling, acid taste is very refreshing to the patient.

The Period of Cardiac Crisis

Strychnine and digitalin are reserved for the crisis, or for emergencies; but when given, they must be given in large doses if results are to be expected. In Merck's "Index," the dose of Germanic digitalin is given as from 6 to 30 mgm. (1-10 to 1-2 grain).

In case of cyanosis and impending cardiac failure, nitroglycerin is the remedy *par excellence*. A fact which is not well known is,

that nitroglycerin is more quickly absorbed from the lingual and buccal mucosa than when administered hypodermically. This may readily be demonstrated by allowing a granule containing 1-2 milligram (1-134 grain) of the drug to dissolve on (or under) the tongue, when its effect upon the cerebral vessels often will be felt within a minute.

Oxygen is an exceedingly valuable agent in pneumonia, but is seldom used early enough. Since we now have the small, compact generators, with their handy cartridges of sodium peroxide, oxygen is always accessible; and its early use gives such gratifying relief to the patients that it should be given in every instance where dyspnea or very rapid, shallow respiration is a symptom.

To some patients an ice-bag gives relief from the distressing pleuritic pain; others cannot tolerate cold, and to them a hot-water-bottle is very grateful. In any case, the continuous application of an ice-bag is at least theoretically wrong, as cold is applied to produce circulatory reaction, and a continuous application of cold will not permit of reaction, i. e., secondary hyperemia of the superficial structures following upon their primary ischemia. Cold or tepid sponging does produce circulatory reaction; bringing the heated blood from the congested lung to the skin, where heat radiation takes place, with a consequent lowering of the temperature, and healthy cutaneous function is promoted.

Toxemia calls for enteroclysis, and, in extreme cases, for hypodermoclysis of physiologic saline solution.

The food in lobar pneumonia should be extremely limited or entirely withheld, as the disease is of short duration, and a digestive disturbance may cause a fatal termination. In bronchopneumonia, however, it should be highly nutritious and given as generously as can be tolerated.

Applicability of the Bacterins

Lastly, another remedial measure has lately come to the writer's attention, and has been made use of by him in his last six cases. This is the use of bacterins, or "bacterial vaccines," after Wright's method, whereby the patient's resistance (opsonic index)

against the invading living microorganisms is raised by the subcutaneous injection of a known number of the corresponding dead bacteria.

Since we know that in many cases of pneumonia much of the toxemia is due to streptococci and staphylococci accompanying the pneumococcic infection, the writer has used a mixed vaccine consisting of pneumococci, streptococci and staphylococci. The results obtained in the small number of cases in which this opsonotherapy was used encourage him in giving it a more extended trial. In at least two of the six cases the

recovery was startlingly sudden, no other treatment having been employed.

Of course, it goes without saying that every case of pneumonia is a law unto itself so far as treatment is concerned, and each one will present special indications which call for special therapeutic measures; but the use of the remedies named in this paper has given such excellent results in the hands of the writer that he feels impelled to recommend them to the attention of this Society just at this time, when "the Captain of the Man of Death" is reaping his annual harvest.

Scientific Medicine Versus Quackery*

Should Ignorant Laymen Be Permitted to Treat the Sick?

By **WILLIAM J. ROBINSON, M. D., New York City**
President of the American Society of Medical Sociology; Editor of *The Critic*
and Guide, *The American Journal of Urology*, and *The Medical Review of Reviews*

EDITORIAL NOTE.—This address, which was delivered before The Brooklyn Philosophical Association, December 18, 1910, is the most forcible presentation we have ever seen of true, scientific medicine, as compared with quackery in all its forms. Not only should every physician read it carefully; he should also put it into the hands of other physicians, and be prepared to bring its irrefutable logic to the attention of the people of his own community.

III.

The Medical Institutes and Quacks in General

I SHOULD not consider my lecture complete if in conclusion I did not refer to the quacks and the quack institutes in general. Those advertising quacks and quack institutes are a greater plague to this country than the cholera ever could be, and are probably responsible for more misery and deaths than is the terrible scourge of tuberculosis.

In my specialty I see cases every day that make one's blood boil. A person has a little pimple on his genitals: it may be herpes, may be due to a little irritation or scratch, may be due to the bursting of a little blister, or to the itch. If such a person

gets into the hands of those advertising quacks, then the Lord have pity on him! That gentry will frighten the life out of him. They will convince him that he has syphilis in the very worst form; and then will proceed to bleed the poor fellow as long as he has, or as long as they think he has, a dollar left. But at the same time they will ruin his health and his stomach by nauseous medicines, pills and tablets—for they have to show him that they are giving him something for his money. I have had numerous such patients, who came to me with the diagnosis of syphilis from the medical institutes and quacks, most of the sores proving nothing but mild abrasions or local irritations.

The same is true of gonorrhea. When these harpies get a gonorrheal patient, they torture him to death. They make him better, then they make him a little worse, then again better, over and over. And in spite of the so-called guarantees to cure, when the patient is no longer able or is unwilling

*This splendid address should receive the widest possible publicity among laymen. To facilitate this, the publishers of *CLINICAL MEDICINE* will reprint the article (when it is completed) in neat pamphlet form. These pamphlets will be sold at \$2.00 per 100. Every doctor who wishes to fight quackery should secure a supply and distribute them widely. Send in your orders today.

to put up more money, he is kicked out, the door is shut in his face, and he is forbidden to come again. They know that, in spite of their written guarantees, no patient will be willing to go to court, and thus bring to light the fact that he has a venereal disease.

Very often when such a patient applies for treatment to a real physician, he is in a most deplorable condition. We find him suffering with gleet, chronic patches in the urethra, quite often strictures from the use of too strong injections, and so on. And it often takes many months to undo the damage wrought by those dastardly quacks.

The same is true of sexual disorders. These are of too complicated a character to be understood or diagnosed properly by the quacks, and still it is here that they reap their richest harvest. By advertisement, circular and booklets, they make our young men and boys think that every case of nightly emission or masturbation is a dangerous disorder which will send them directly to the grave or to the madhouse, and when they succeed in enticing a youth in their clutches, they not only rob him of his last cent, but they generally succeed in making a nervous wreck of him. And then his name and address are given to other quacks, and he is overwhelmed with other letters, other "literature," assuring him that they can *positively* cure him or it will not cost one cent; and so similar alluring offers with fake testimonials are showered upon him to the end of his days.

You know—or you may not know—there are letter-brokers who make it a regular business to sell letters from sufferers from various diseases to different quack concerns. These letters are carefully classified, with remarks as to the social and financial standing of the patient. If you ever had the misfortune to become the patient of a quack, and he knows your right name and address, you may be sure that these will travel from quack to quack; in truth your name will go down to posterity.

The Quacks, and Tuberculosis and Cancer

What the advertising quacks and so-called medical institutes do to tuberculosis and cancer patients is too heartbreaking to speak about with equanimity. People in

the last stages of consumption or incurable cancer have been made, by the lying representations of the wretched quacks, to give up their last dollar, to mortgage their little homes, to travel perhaps hundreds of miles to the abode of such a quack—only to hasten the inevitable end.

Such abominable things are still going on now, though we are glad to say the government is becoming alive to its duty and our vigilant post-office has put several of the most dastardly consumption- and cancer-cure specialists out of business. Let us hope that they will succeed in driving all of these nefarious swindlers out of business or out of the country.

The Drug-Habit Fakers, and Their Methods

Another class of dastardly wretches that deserve prison for life are those scoundrels who sell "cures" for the morphine or cocaine habit, *which cures themselves are loaded with these drugs*; in other words, instead of curing the patient, they enslave him still more deeply. I referred to such a "cure" in an early part of this lecture. Here is the report of another such cure, which appeared in one of this week's journals (*Journal of the American Medical Association*, Dec. 10, 1910). As I said before, it is almost incredible that human depravity could reach such low depths, but the report is official, and unfortunately we must give it credence. Here is the case:

"Dr." J. W. Coblentz of Ft. Wayne, Indiana, has for several years operated a mail-order drug-habit "cure." When the government recently commenced investigating him, one of the post-office inspectors wrote under an assumed name, representing himself as a man who had been addicted to the morphine habit for about six years, and who was using about 15 grains daily. Coblentz replied that he could be cured in four treatments, and that the cost of treatment would be \$11. Advertising leaflets were also sent to this inspector, in which it was stated that Coblentz' treatment was a "permanent and positive cure for the morphine habit." By implication, the patient was led to believe that the "treatment" contained no morphine.

For instance, take this quotation: "A Word of Advice to the Victim of Morphine and Opium: The way to conquer the habit is to be determined. *Resolve that come life or death, never to touch the deadly drug.* Do not indulge in half-resolves. The enemy of all good only seeks this opportunity to tempt you. Do not take every cure you see advertised, for how easy it is to disguise the drug under the garb of a new cure and beguile the poor, unsuspecting victim into the belief of being cured while all the time he is taking the drug under a different name. I do not send out trial bottles. This is the method pursued by the medical shark. Half the time you receive your old drug (from whose clutches you are trying to escape) with the taste disguised. I can truthfully say that I can and will cure you if you will put your case in my hands."

The inspector sent \$11 to Dr. Coblentz and received seven packages of medicines. These were analyzed by chemists in the Department of Agriculture. *Four of the preparations contained morphine*, two were tonic tablets, and one was a laxative medicine. It was shown at the trial that the twenty-four-hour dose of the "treatment" sent by Dr. Coblentz to the person who was supposed to be using 15 grains of morphine daily contained 20 grains of morphine!!!

The post-office inspector testified that he had interviewed Dr. Coblentz, and that Coblentz had told him he was "treating" about twenty-five patients for the morphine habit, and that these patients had been under "treatment" for from five to twenty years! Coblentz also admitted that the medicine which he sold to patients for the cure of the morphine habit contained morphine in about the same amount as the patient was accustomed to using, and that this quantity was continued throughout. Coblentz is said further to have admitted that he had really never cured the appetite of anyone addicted to the morphine habit, but that the patients reached the point where he called them cured; however, they had to keep on using the medicines. Correspondence was submitted at the trial which showed that one of Coblentz' patients had been taking the "cure" for fifteen years and was still taking it!

In view of all the evidence, the acting assistant attorney general summed up the case against Coblentz as follows:

"The respondent is engaged in mailing letters and printed circulars to morphine habitués, and is soliciting and obtaining money from such persons by promising to cure them of that habit—that is to say, of the taste, desire and appetite for morphine; whereas, in truth, he does not intend to cure or try to cure such habit, but instead intends to furnish patients with a preparation containing substantially the same amount of morphine as they are accustomed to take, his purpose being to deceive such persons and to profit by their appetite for morphine and to get money out of them under false and fraudulent pretences of furnishing them a cure for the habit, when he is simply furnishing the drug itself and not a cure."

A fraud order was issued against the infamous quack and his Association.

There are hundreds of such frauds. I could go on all day relating to you such instances, such as the case of a New York quack who made a carpenter give up his life's savings of \$1,500 for a bottle of "radium," which was nothing but common water; I could tell you of the fakers that sell electric belts which contain about as much electricity as does this table, and for which they make the most outrageous, most fraudulent claims; I could tell you of the fellow who sells magic foot drafts; I could tell you of the magic-boots man; I could tell you of that miserable Munyon, whose ugly face has been staring at us from the pages of the newspapers for many years, and who has just this week been convicted and fined for misbranding his medicines, for palming off plain sugar as wonderful asthma and rheumatism cures; I could tell you of hundreds of the most ridiculous, most incredibly absurd, or most infamous and most dastardly ways of robbing the people of their money; but lack of time forbids. I wish to conclude with the expression of my most profound conviction, that sooner or later

Regular Medicine Will Be Supreme

Just as sure as I can be of anything, so sure am I that the future, the great glorious

future, of medicine is in the hands of the regular medical profession.

Regular medicine is not what it was a hundred or even fifty years ago. We have broken the chains of authority; we no longer follow blindly the *dicta* of leaders; we investigate and analyze all statements regardless from what source they may come; heterodox opinions are now given space in almost all our journals; and what is of the utmost importance, in the profession itself there are thinking and fearless critics who are not afraid to point out our weaknesses, to ridicule our foibles, and to guide us to the right path. And let us remember that all the accessory aids which are required for the progress of medicine—the microscope, the bacteriologic laboratory, the physiologic laboratory, the chemical laboratory, all the physical instruments of precision—are in the hands of the regular profession, and not in the hands of the quacks.

And let us further remember that every discovery of any importance within the past half or three-quarters of a century—anaesthesia, antiseptics and asepsis, diphtheria antitoxin, the x-ray, Finsen light, radium, antinephritis serum, the role of the mosquito in the transmission of malaria and yellow fever (a discovery which alone is worth billions of dollars to the human race), the isolation of the active principle of the suprarenal gland, the introduction of cystoscopy, the discovery of the tubercle bacillus, the gonococcus, the spirochæta pallida, the Wassermann reaction, Ehrlich's "606," in short, every discovery of importance either in sanitation, prophylaxis, medical and surgical treatment or in diagnosis of disease—has come from the hands of the regular medical profession or those directly connected with it.

Lastly, let us also remember that the requirements for entering upon a medical career are becoming higher and stricter, the preliminary education is of a higher character, and the course itself is more extensive and better in every respect.

Nil desperandum. The future of medicine is in the hands of the regular medical profession, and we are tolerant enough to take in everybody who is sincerely desirous of practising scientific medicine, even if he

happened to graduate from a sectarian college. But we do not want ignorant and presumptuous quacks. For the sake of the people we must keep them out.

In concluding this general survey, I will now give you a summary of what I have said:

Summary and Points of Emphasis

1. The human body is a very complex and very delicate organism. To understand its normal mechanism (its physiology), and its abnormal derangements (its pathology or disease), requires years of theoretical study and practical experience.

2. The public is not capable of judging as to who is and who is not a competent physician, any more than it is capable of judging as to who is and who is not a good steamship captain, a good electrician, a good chemist, a good engineer, a good astronomer, a good mathematician. Only competent boards from the respective professions or trades can decide that more or less satisfactorily.

3. Without laws and regulations for the practice of medicine, the country would be overrun by ignorant conscienceless quacks, deceiving, cheating and preying upon the public, and the damage to the people's health and the increase in mortality would be something fearful.

4. To talk of free competition in the practice of medicine shows a defective mentality. Medicine is not a trade like selling shoes or clothes. When a person has had his health ruined or has been driven to an untimely grave, then it is no consolation to him or to his relatives to know that the doctor who treated him was an ignorant unlicensed quack. It is too late. The quack should not be given the opportunity to succumb in the survival-of-the-fittest struggle *after* he has done incalculable damage; he should be prohibited from entering into the struggle; he should not be punished after his misdeeds, he should be prevented from committing any.

5. The laws that we demand for the regulation of medicine are, most emphatically, not for the protection of the medical profession, but for the protection of the people. We are willing to admit anybody to the practice of medicine who can give proof that he is more

or less competent to perform the delicate duties of a physician.

6. That there is incompetence and ignorance in the medical profession is admitted, but the remedy for that is not letting down the bars for all comers to enter, but raising them still higher, so that eventually only really competent and intelligent men and women may be entrusted with the heavy responsibilities of healing the sick.

7. The regular medical profession is aware of its shortcomings, but it is honestly trying to eliminate them by raising the standard of preliminary education, by enlarging the curriculum, by increasing the number of years required for completing the medical course, by extending the laboratory facilities, by recommending hospital experience as an obligatory part of medical study; in short, it is doing everything in its power to raise the standard of the physician of the future. While as to the quack, all *he* demands is the abolition of all criteria, of all standards, of all educational requirements.

8. The statement that drugs are absolutely useless, and never are of any benefit in the treatment of disease, proceeds from ignoramuses who have not used and are not familiar with the action of drugs. I make the positive statement that there is not at the present time *a single physician of any eminence* who denies the value of drugs. He may object to the abuse of drugs, to too great reliance on them, but not to their proper use. And there is not a single physician who does not use some drugs occasionally. And what's more, the fakers who publicly decry the use of drugs as poisons use some few drugs in their practice, in secret. But of course the drugs they use are "all right," because they are "mild and harmless"—so they say.

9. The idea conveyed by quacks, physical culturists, naturopathic (so-called) doctors, osteopaths, and that ilk, that the scientific medical profession treats by the means of drugs only, is utterly false. There is not an agency in the world, material or immaterial, which the regular profession does not use in the treatment of disease. As to diet, it is an important subject of study with us, and the real advances in the science of dietetics and the nutritional value of foods are made by the medical profession, and the physiologists and chemists who work hand in hand with it.

10. No conciliatory attitude is to be adopted with the Christian scientists, mental healers, absent-treatment quacks, osteopaths, chiropractics, etc. The greater part of their claims is impudent fraud, while the grain of truth in some of the cults is incorporated in the regular system of medicine.

11. As to various quack institutes, consumption and cancer specialists, lost-manhoo professors, etc., etc., they should be treated as ordinary bunco-steerers or highway robbers are. They are worse than common thieves. They deserve no consideration, as they show none toward suffering humanity. Unless agreeing to give up their practice absolutely, they should be driven out of the country or put behind prison bars.

12. There is no excuse or reason—except a selfish one—for the existence of different "schools" of medicine. The fundamental subjects—nine-tenths of all studies—are the same in all schools. On the subject of treatment, the schools are coming closer together, and the time is near when there will be only one school of medicine, just as now there is only one school of chemistry, one school of engineering, one school of physics, one school of astronomy. And that school will be the school of regular scientific medicine.



The After-Treatment of Hand-Lesions

By RALPH ST. J. PERRY, M. D., Parkers Prairie, Minnesota

EDITORIAL NOTE.—Dr. Perry's exceedingly interesting series of articles, which deal with the common lesions of the hand, with which every general practitioner must be more or less familiar, will be continued in succeeding issues of "Clinical Medicine."

II.

THE filling of deep cavities in a wound may be greatly facilitated and lost finger-tips may be restored by sponge eduction, a so-called sponge grafting, which in reality is merely a method of supplying a framework within which the granulations are induced to grow and spread to a far greater degree than they would without any such encouragement.

Sponge Eduction or Grafting

Transverse sections of fine-grained bleached surgeon's sponge, cut of the right size and shape and about 1-16 of an inch in thickness, are carefully cleansed and sterilized. A piece so prepared is laid in the granulating cavity or over the granulating end of the finger, fastened in place by two crossed strips of plaster, and kept constantly wet with a mixture of equal parts of hydrogen peroxide and saturated solution of boric acid. The patient is instructed to deposit (with a dropper) a few drops on the sponge every ten minutes.

The granulations grow up into the meshes of the sponge, gradually filling the pores, until after a day or two the sponge must be removed gently lest it become firmly imbedded in the growth of granulations. When one piece of sponge is discarded put in another, continuing until a sufficient growth has been secured to remedy the defect.

Case 10.—Merchant. A small scratch on the ball of the thumb became infected and resulted in an ulcer about an inch in diameter and half an inch deep which refused to heal under ordinary treatment and totally disabled the hand.

The granulations, which were weak and unhealthy, were given stimulating treatments of silver nitrate for three or four days and then sponge eduction was resorted to. In addition to the hydrogen-peroxide and boric-

acid solution, there was used, once daily, a feeding of bovine, which was allowed to stay on for an hour, when the sections of sponge were changed. Inside of forty-eight hours improvement was noticed and at the end of two weeks the ulcer had all filled in and a healthy scab formed.

Case 11.—Machinist. The tip of the thumb was caught in some cogwheels and the "pulp" mashed and torn away, leaving a wound which if allowed to heal unaided would have effected a result fatal to the specialized function of the hand and been the cause of serious financial loss to the patient, reducing him from a first-class specializing mechanic to an ordinary one. The amount of tissue destroyed reduced the diameter of the thumb-tip fully half an inch.

The wound was trimmed and smoothed up preparatory to a skin grafting, when it was suggested that sponge eduction be tried. Accordingly, the materials were prepared and the eduction initiated before granulations began to form. When they did develop, the spongy framework was there to stimulate and encourage them and to afford a means of support in their growth. In a week the granulations had grown to such an extent that the missing portion of the thumb had been almost entirely restored, while by the tenth day the new growth had been so satisfactory that the eduction process was suspended and unaided healing allowed to take place. Scabbing over followed, and the result was most satisfactory to all.

Bone Grafting

Bone grafting may become necessary or desirable where part of a bone has been destroyed, to restore strength to the carpus or metacarpus, or for functional or cosmetic advantages in the phalanges. The bone cavity is cleansed as thoroughly as possible with saline solution and hydrogen peroxide,

and small pieces of fresh bone from another individual or of decalcified bone are implanted as in skin grafting.

Case 12.—Brakeman. The hand was crushed in making a coupling and during the course of the healing a portion of the middle-finger metacarpal bone became infected and necrosed. The dead portion was cleaned away without unnecessary damage to the periosteum, and preparations were active for a grafting of decalcified bone, when the ambulance brought in another railroad victim whose injuries required amputation of the arm. Inquiry disclosed the fact that the new arrival was free from syphilitic, tuberculous or other taint, so a portion of bone was taken from the amputated hand of this man and grafted immediately into the waiting cavity in our first patient's hand. The wound was dressed in iodoform and closed as securely as possible against extraneous influences.

Contrary to expectations, the graft "took," and the defect in the bone was so effectually closed that in after-years the man declared the hand to be as strong as the sound one.

Case 13.—Militiaman. Accidentally shot through the hand, a Mauser bullet destroying a part of the ring-finger metacarpal. Some curious friends removed the dressings to "examine the wound" and infected it. Several fragments and splinters which were actively engaged as foci for new bone formation were thrown out in the inflammation and discharge which followed. After getting the infection eliminated as much as possible the wound cavity was thoroughly cleansed with normal saline solution and hydrogen peroxide, and a piece of decalcified chicken bone implanted in the place of the discharged bone. To encourage granulations, the parts were fed with the iodoformed bovine mixture already described.

Case 14.—Machinist. Suffered a crushing injury of the thumb in which the metacarpal bone was comminuted. In the cleansing and other manipulations incidental to the first-aid services, the overly zealous first-aiders carefully picked out and threw away the small fragments of the comminuted bone.

To preserve the strength and function of the thumb it was decided to graft a piece of bone into the metacarpal, but when the

stock of supplies was looked over it was found there was no decalcified bone on hand. In this emergency a piece of ivory (cut from a poker chip) which had been used in some decalcification experiments, and which was sterile, was used as a graft. The surrounding tissues took kindly to the reformed sporting element and in due course of time the graft became enclosed and incorporated in the new bone growth, a satisfactory result being secured.

Silver-Wire Bridges

Silver-wire grafts have been used to help bridge over defects in bone continuity and as a support for weak union. A piece of sufficiently heavy and rigid silver wire is selected, half an inch longer than the defect, and bent into a shape corresponding to that of the missing portion of bone, as to curves or angles. In the opposing ends or surfaces of the bone are drilled holes, and into these the ends of the wire are forced and left there. The silver is innocuous and nonabsorbable and forms a serviceable nucleus around which a callus or new bone growth centers.

Case 15.—A Vey warrior, West Africa. Was shot in the hand with a slug of iron (from a pot) and about half an inch of the middle-finger metacarpal bone was eliminated in the transit of the slug. Shreds of periosteum which remain in the wound gave hopes of regeneration of bone-tissue, and in order to preserve the length of the bone, its curve, and so on, a silver-wire graft 1-8 of an inch in thickness was inserted, and around this sufficient bone-tissue eventually formed to restore the strength of the bone as a whole. After placing the silver graft in place, the soft parts were patched up the best possible, special efforts being made to secure a closure of the palmar wound with the least possible amount of cicatricial tissue. The entire wound was then dusted freely with iodoform, too freely, in fact, for on the third day the patient showed signs of iodoform poisoning. The dressings were then changed to Peru balsam, a little iodoform and oakum immediately covering the wound. The toxic symptoms disappeared, and eventually a good result was secured.

Wax Filling for Necrosed Bones

"Bone-wax" is often used as a filling in order to encourage bone granulations in tuberculous and other necroses. The wax is prepared after various formulas, e. g.:

1. Von Mosetig-Moerhaf bone-filling:

Iodoform	parts 15
Spermaceti	" 10
Oil of sesami	" 10

Melt the oil and wax together in a sterile bottle and let boil for fifteen minutes over a water-bath. Incorporate the iodoform while the fats are boiling, remove from the fire, stirring constantly until cool. For use, heat the mass to 120° F. in a thermostat or water-bath.

2. Horsley's bone-wax:

Salicylic acid	part 1
Oil of almond	" 1
Beeswax	" 7

Melt over a water-bath, boil for ten minutes, then allow to cool under constant agitation. For use, heat to 120° F. in a thermostat or water-bath.

In using either of these bone-fillings, the cavity operated upon should be cleansed as for grafting, then mopped or swabbed out with 95-percent carbolic acid followed immediately by pure alcohol, mopped dry, and then the melted filling poured into place.

Case 16.—Farmer. Suffered a bruise on the dorsum of the hand which was severe enough to involve the ring-finger metacarpal bone and afford a focus for a tuberculous invasion. When seen by the surgeon, after several weeks of home maltreatment, there was such a considerable loss of tissue that fully half of the bone was missing.

The external parts were cleansed, a sufficiently large incision was made over the length of the bone at the site of the disease, the periosteum reflected and the necrosed and diseased bone removed with curet and gouges. The cavity was cleansed with saline solution, iodized gasolin, and again with the salt solution, then mopped out with 95-percent carbolic acid followed immediately by alcohol, after which it was mopped dry and filled barely full with liquefied Horsley's bone-wax. (In cooling, the wax presents a concave surface, which is shaped up with a scalpel.) The periosteum was laid in place over the wax and the overlying soft

parts were drawn together and sutured. Part of the wax reappeared a few weeks later and was cut away externally, part of it evidently having been absorbed or encysted in the new growth of bone instead of being pushed out of the cavity.

Case 17.—Farmer. Following a slight injury to the thumb, there developed a tuberculosis of the metacarpal bone of that member. The nature of the lesion was not recognized at first and so was treated as a felon and an ordinary abscess. An exploration with a probe, in the course of treatment, revealed the loss of a considerable quantity of bone, and then a history of tuberculosis definitely settled the future line of treatment.

An incision was made over the diseased part, all infected bone removed, and the cavity cleansed and prepared as described in Case 15, after which the cavity was filled with Von Mosetig-Moerhof's bone-filling and the soft parts replaced and sutured. The external wounds healed in a few days. Nothing further was ever seen or heard of the wax-filling, the entire mass evidently being encysted or appropriated by the new tissue instead of being thrown out by new-growth pressure.

Bismuth-Vaseline Bone Injection

Some months ago it was discovered that a mixture of bismuth subnitrate and vaseline when injected into the cavity of a tuberculous bone or other necrotic bone disease has a peculiar curative effect, many cases which had resisted other measures promptly healing under this treatment. The formula used for injection is one part of the bismuth to two parts of fluid (not melted) vaseline. [The author, presumably, refers to the "liquid petrolatum" of the Pharmacopeia, commonly known as vaseline oil. The combination itself evidently is an adaptation of the *bismuth-vaseline paste* introduced by Dr. Emil G. Beck, of Chicago, for injecting fistulous tracts, tuberculous sinuses and abscess cavities, and found extremely useful, by Dr. J. R. Pennington (CLINICAL MEDICINE, 1909, p. 45) for healing rectal fistulas. For this paste ordinary petrolatum, of various degrees of firmness, is used.—ED.]

Case 18.—Printer. Had his hand pinched in a job-press which he was feeding. The

soft parts were bruised, the skin was lacerated, and a fracture of the os magnum was suspected, this suspicion later being rendered almost certain by the development of a necrosis. No tuberculous history could be elicited.

The necrotic cavity was washed clean of pus, dried thoroughly, and then injected with the foregoing bismuth-vaseline paste,

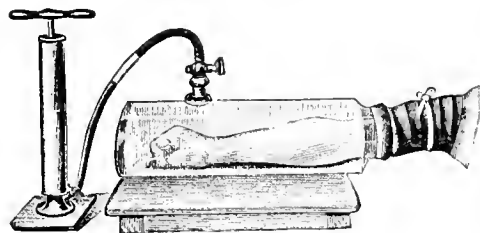


Fig. 19 Vacuum Apparatus

an ordinary urethral syringe serving for the purpose. During the ensuing week portions of the paste were thrown out, and when a second injection was made on the tenth day, it was noticed that the cavity had materially decreased in capacity. In a few days after the second injection all discharge ceased, the outlet closed and scabbed over, and the bone apparently healed over. The patient reverted to the care of his family physician, who subsequently reported the cure as permanent.

Drainage of Wounds

In all wounds of a cavernous nature which are left to heal by granulation there must be provided ample means of drainage. In a comparatively flat-surfaced wound the absorbent dressings afford sufficient capillary drainage to keep the same clean, but where cavities, tunnels and undermined edges exist, a drain must be afforded which will keep free and open. Usually a few strands of silkworm gut or a small bunch of horse hairs will suffice, they being removed one or two at a time as the healing progresses and the need for them decreases. In some instances, where there is much discharge or where muscular contraction tends to diminish and close the outlet for the discharge, it is advisable to resort to a rubber tube. Never forget that a drain of any character is a foreign body and should be employed no longer than absolutely necessary.

Passive Motion, Massage, Vibration

Passive motion should be instituted very early in all injuries where there is a prolonged disability; it prevents agglutination of the soft parts and ankylosis in the joints, stimulates the circulation and helps to cleanse the wound. In ordinary injuries, where there are no tendons or nerves sutured and in palmar abscess and other phlegmonous conditions, gentle movements are begun about the third day; in fractures, joint injuries and tendon-cases they are begun at the end of the first week, often much earlier if local conditions so warrant. These movements at first need be only enough to insure freedom of the parts and should be very gently, slowly and guardedly carried on; as the case progresses to recovery they can be increased in degree until by the time the patient is discharged all motion possible has been restored to the parts.

Massage is a most useful measure to employ in many cases where the circulation in the parts is sluggish, where small adhesions have formed, and as an adjunct to passive motion. Because of the closely underlying bony structures of the hand, only the gentler methods can be employed lest the injury be aggravated. The forms used are stroking, friction, kneading and percussion. In giving a massage treatment, the applications are first made to the distal parts and gradually extended upward as far as necessary or desirable.

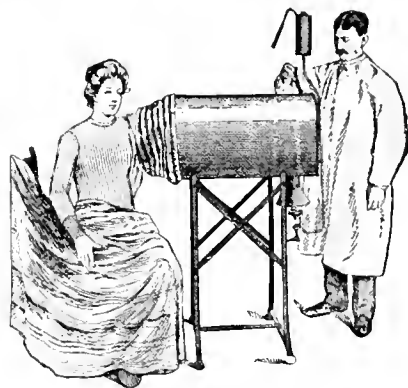


Fig. 20. Hot-air Apparatus

Vibratory treatments are merely a form of mechanical massage in which percussions of varying force and speed are delivered.

Vacuum and Hot-Air Treatment

Vacuum treatments are a method of inducing an artificial hyperemia of the parts by enclosing them in an air-tight container (Fig. 19) and then extracting a portion of the air by means of an air pump, thus creating a partial vacuum. This form of treatment, which has been in use for many years, has recently been studied and perfected or improved by Bier, of Bonn, who has successfully applied it in cases of tuberculosis, arthritis, various wound infections, chronic stiff joints, neuralgias, and similar troubles.

The hot-air bath (Fig. 20) is another method of inducing hyperemia, and is used in the same class of affections as is the vacuum apparatus. It may be said that these two pieces of paraphernalia will be found extremely useful, not only in acute cases, but in those chronic stiff joints which come to you after years of neglect and mistreatment.

Management of the Final Stages

The leaving off of dressings is a matter which is frequently perplexing. As a rule it is safe to persist in using a dressing as long as there exist any of the indications which originally demanded its use. Dan-

gers from infection weather exposure, motion, additional traumatism or meddling are sufficient reasons for maintaining the dressings, regardless of the apparent well-doing of the injury. The surgeon may remove them temporarily for purposes of treatment, but should never allow premanent removal prematurely. At the same time, the necessities of the patient should be borne in mind, and just as soon as compatible with safety to the injured parts he should be allowed to resume his occupation. Do not let the urgings of the patient, employer, lawyer or insurance agent mislead you.

When a wound has entirely healed, after prolonged treatment, the skin usually is soft and tender, all callosities having been removed, and the patient often complains that the hand is too tender to use at his occupation. To overcome this form of disability expeditiously, the hand may be rubbed with a weak solution of alum, or with a 5-percent solution of formaldehyde. If the patient finds it necessary to resume hard manual labor immediately upon recovery, he should wear as a temporary protection a glove from which have been cut away those portions not needed for the covering of the tender parts.

MEN of decision all meet with derision. Cromwell's is still a name of opprobrium; Disraeli was despised by millions; even Lincoln was reviled by his antagonists. Weaklings neither wear nor weave the crown of thorns. Can't you see how absolutely impossible it is to be clear-visioned and upright and uncompromising and true to the highest dictates of duty, citizenship and conscience, without arousing a hubbub from every man who detects *his* fall in *your* rise? Nobody wastes the time to hate a nobody.—Herbert Kaufman.

The Doom of Therapeutic Nihilism

The Impending Revolution in Treatment

By **GEORGE L. SERVOSS, M. D., Fairview, Nevada**

FOR several years, and up to a very short time ago, many of the recognized authorities have preached against the use of drugs, to any very considerable extent, in the treatment of disease, and many of the textbooks dealing with the principles and practice of medicine have devoted *pages* to pathology and diagnosis, and *lines* to therapy. The majority of the teachers have followed the precepts of the writers accepted as authorities and have given very little attention to treatment. Much time has been devoted to laboratory work, and drugs have been tried out on healthy persons and animals, and many of them, through experiments of this sort, have been pronounced worthless or possessed of very little therapeutic activity.

Bedside Experience Better Than Laboratory Experiment

In spite of obstacles of this sort, there have been a few men who have not lost their faith in drugs and their application for the relief of diseased conditions, and these men have made their experiments at the bedside, applying their remedies to the sick, and, in many instances, drugs which have been pronounced worthless through laboratory experiment upon the healthy have been found to be remedially active when applied to pathologic conditions.

For a number of years, these men have been held up to ridicule by those *soi disant* authorities who insisted that drugs were practically worthless, but they have pursued their own investigations in a quiet way and have demonstrated that, when drugs are applied properly and according to known effect, anticipated results have followed. These same men, many of whom are not located in the metropolitan centers or connected with medical schools, have, from time to time, published reports of their findings; and following such reports, other doctors have made like applications of the drugs in question, with like results, thus demon-

strating that such drugs have not been found wanting by those who understood them and knew how to apply them.

Many of the men who have pronounced drugs worthless have been, and are now doing, consultation practice exclusively, and because of the fact that they have seen their patients, or rather the patients of others, but once or twice, they have not been in a position to follow up the action of the applied remedies as have those who observe their cases from start to finish. Consequently, such men do not see and do not know drug-action, and are forced to accept the decision of others regarding the same. Many of the laboratory experimenters are not doctors of medicine and consequently have had no clinical experience, and their experiments are based upon set rules, as applied to animals or persons in health, and their findings are not based upon the action of drugs in sickness.

Lack of Acquaintance with Drugs Cause of Success of Proprietaries

Owing to the fact that drugs have been used to such a limited extent during the past two decades, pharmacology has been neglected to a very considerable extent in our medical schools, and men have been turned out of college with a good understanding of pathology and diagnosis but with little idea of the treatment to be applied to give relief in such pathologic conditions, the conclusion having been reached that the majority of acute diseases were self-limited and that any treatment would be of but slight avail. During this time the doctor has been a diagnostician and pathologist, but has done very little in the way of relieving his patients.

Such a course has given the manufacturer of proprietary medicines an opportunity to educate the masses in the use of such agents, the consequence being that we now are a nation of drug-takers who employ such agents without due regard to the real conditions, and they are doing more harm than

good; but these drugs are being used for the reason that the people want, and will have, treatment, in spite of all that the authorities may say or do to the contrary.

Following up the findings of those men (other than the recognized "authorities") who have found drugs not wanting, a revolution is taking place in the matter of applied therapeutics. The medical student today will not accept a textbook which does not devote some space, other than a few lines, to the *treatment* of disease, and the same is true of the thinking doctor. Both want to know *what to do* when certain conditions are encountered. They do not want a set line of treatment laid down in every case, as it is now recognized that the conditions rather than the named disease are to be treated—the name signifying but little.

Why Symptoms Count

It is often said that symptoms should not be treated. If not, why not? Symptoms are simply the signs of certain conditions, either normal or abnormal, and it is these conditions with which the doctor comes in contact, and not the disease-name. One may encounter one case of pneumonia with extremely high temperature, accompanied by delirium, while the reverse may be true in his next case. Does the same treatment apply to both alike? I think not, in fact. I am absolutely certain that it does not. One case may be sthenic and another asthenic, and it is certain that the same treatment would not be applicable to both. It is clear, then, that the symptoms must be taken into consideration in every individual case.

Individual peculiarities also are to be considered, especially in adapting the dose of the drug employed. One could hardly employ the same dosage in the slight, emaciated woman as he would for the heavy, robust man. Nor would one employ drugs in like manner in treatment of the young and the aged as would be followed with the middle-aged person. All of these, and many more, facts are to be taken into consideration in the rational application of drugs.

Dosage an Important Question

Dosage is another important question in the application of drugs. Our forefathers in medicine were of the opinion that large

doses of calomel were absolutely necessary, but in recent years it has been found that very small doses of this drug give far better results. Certain of the authorities have cited "average" doses of given drugs, but in actual practice it has been found that the dosage must be either larger or smaller than set down, in order that the anticipated results may be obtained.

In an editorial in *The Journal of the American Medical Association* for August 27, 1910, it is pointed out that, although the dosage of atropine given by the authorities is up to 1-60 grain, such dosage may be followed by toxic symptoms, and that clinical experience has shown that dosage as low as 1-1200 grain not infrequently yields better results. The authorities mention the dosage of glonoin as from 1-500 to 1-100 grain, but it has been shown clinically that even smaller doses produce as good, if not better, results in many instances. Consequently, as this editorial states, "both pathology and pharmacology teach that in many instances this difference in reaction of a given organism, when not associated with actual destructive changes, is a mere matter of variation in irritability. The problem of treatment, then, becomes a matter of dosage."

The editor of *The Journal* accepts the fact that drugs are employed again more and more in the treatment of diseases, and in the course of his remarks says that the use of the drugs is based upon physiologic analysis of the condition under observation, as applied to functional disturbances. To quote once more from this editorial:

Rational Therapeutics

"The treatment of a condition by the careful physiologic analysis of the functional disturbances involved, combined with the application of the drug based upon knowledge of its action, is shown as follows: A case of angina pectoris vasomotoria: heart symptoms, pressure in the chest, a feeling of intense fear appearing on exposure to cold. The physiologic analysis makes the following chain of events likely: Cold causes peripheral vasoconstriction; this leads to increased blood pressure, which exerts a stimulus on the depressor nerve, which in turn stimulates the vagus center and thus

leads to head symptoms. The whole or part of this chain is probably in a condition of increased irritability, as normally such a result would not be observed. Instead of decreasing the irritability of the factor involved, however, it is necessary only to interrupt the chain by the administration of atropine, which paralyzes the vagus ending in the heart. The patient can now dip his hands into ice water without any feeling of distress, which, however, comes on again when the effect of the atropine wears off."

What is here said is one of the arguments which have been made right along by those who have been taking all such conditions into consideration, and through such recognition of the conditions have been able to apply drugs rationally. The editor might have gone a step further in his description of the action of atropine and shown that dilatation of the peripheral blood-vessels also overcomes the disposition to fear of cold, and that by so relieving the blood pressure internally gives relief in angina.

The Pharmacologist Must Not Over-Shadow the Clinician

In concluding his remarks, the editor says: "The close affiliation of the clinician and the pharmacologist here outlined, besides being of practical use to the former, must of necessity be a great stimulus to the latter, providing he does not permit the urgency of the immediate solution of clinical problems on the basis of insufficient knowledge to influence unduly the direction of his investigations." This is very true, in more ways than one, as we not infrequently see reports, based upon very meagre findings clinically, regarding the use of drugs, and if the laboratory experimenter is not careful, or if he becomes too enthusiastic, his findings may likewise be of little value.

On the other hand, the editor might have gone a step further and brought out the fact that not infrequently laboratory experiments might be faulty as regards the action of drugs in disease. It is a self-evident fact that so much attention has been paid to laboratory reports and so comparatively little to those of a clinical nature that it becomes a hard matter for many to give

due credit to clinical findings, unless such findings are corroborated by those of the laboratory. The editor named, who quotes Loewi, admits that the clinician frequently fails of obtaining results similar to those of the laboratorist, and that such failure is based upon the difference in action of the drug in the normal and diseased organism.

This very same argument has been advanced by the clinician who has applied certain drugs in disease and gotten results in spite of the fact that such agents have been pronounced worthless by the pharmacologist. For a time such arguments were ridiculed and disagreed with, even by the writer of the editorial above quoted, but time and experience have demonstrated that, in the majority of instances, the clinicians have been right.

Within a very short time the editor of *The Journal of the American Medical Association* has allowed the publication of certain articles regarding drugs and their applications which, in tone, have been absolutely contrary to the arguments brought forth in the editorial in question, and which may have mislead many of the readers of *The Journal*.

A "Journal" Writer's Ignorance of Drug-Action

One writer in particular, Barton, in a paper on "Pharmacologic Fetichisms," disagreed with the clinical findings of hundreds of doctors, not only in this country, but abroad. Barton said that for some time he employed aconite in the treatment of neuralgia, but that this drug could have no antineuralgic effect. By such remark he showed conclusively that he knew little, if anything, of the physiologic action of this drug, applied clinically. In neuralgia we invariably have a localized congestion at the seat of the pain, and by the administration of aconite, in one form or another, we obtain vascular dilatation, with equalization of the circulation, and it does seem to me that the use of this drug in this connection would be extremely rational.

Barton further says that veratrum viride is worthless in puerperal eclampsia—and that in the face of hundreds of reports to the contrary. In cases of this sort we have an accumulation of toxins with which to con-

tend, and it is a known fact that veratrum increases elimination, and by so doing assists in the carrying off of waste material. Again does that writer show his lack of knowledge of physiologic action of the drug in question. Dr. Barton is not the only man who does not take into consideration physiologic action, and it is little wonder that he, like others of his class, has so little faith in drugs in the treatment of disease.

The Coming Revolution in Treatment

The time is coming, and that within a very short time, when the physician, to be successful, will be obliged to study his drugs as he does his pathology and diagnosis, if he desires success to follow his efforts. This is only a beginning of the revolution which is to take place in the question of treatment. It is very probable that this reaction will bring about a condition markedly different from the one which has been pursued for several years past, with a renewed interest in the application of drugs. With such renewal of interest, it is very

probable that some will go to extremes, and that many agents will be employed radically, and without the proper attention to, or knowledge of, the physiologic action, based upon cause and effect.

In consequence, it stands the doctor well in hand to study his agents carefully, both as to their pharmacology and their clinical application. If such a course is pursued, it is very probable that drugs will be given the position to which they are entitled, and that therapeutic nihilism will pass into history, never to be revived.

There is a demand from the patient for treatment of a curative character, and unless the doctor fulfils this demand, he need not anticipate success. But he should adopt his treatment with care, taking into consideration all of the conditions, and symptoms attendant thereto, and apply only such remedies as he knows will correct such conditions. He should study not only pathology and diagnosis, but every phase of action of drugs as applied to conditions other than normal, as well as the normal.

Acute Anterior Poliomyelitis in America

*New Data Concerning Diagnosis and Etiology, and Considerations
Regarding Treatment*

By TOM A. WILLIAMS, M. B., C. M. (Edin.), Washington, D. C.

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Epiphany Free Dispensary, etc.

THIS is not yet the time to collate all the observations made upon the epidemic of acute anteriopoliomyelitis which has been spreading from Massachusetts since 1904. But any new fact must be of value in our endeavors to cope with this grave disease, which is far more prevalent than is yet supposed. This year at least a thousand cases have occurred in Pennsylvania. In the District of Columbia, the committee appointed to study the outbreak there knows of more than five hundred cases. Altogether more than eight thousand cases have already occurred; and well over five thousand of these were in the United States.

To the practitioner, perhaps the most practically interesting question is the early

diagnosis and the differentiation of this condition from other febrile diseases.

Like most zymotic affections, this so-called infantile paralysis is most common in childhood, and it is exceedingly difficult to diagnose before paralysis has declared itself. But as the prognosis regarding full recovery of paralyzed muscles is not favorable, it would be well were we able to diagnose the disease before its invasion has reached the anterior horn and destroyed the cells there or impeded their function sufficiently to cause paralysis. Were we able to ensure recognition thus early, we should be in better position to estimate the utility of some of the therapeutic measures which have been declared serviceable; for, as a rule, the disease sub-

sides naturally very soon after paralysis has occurred.

The Prodromal Symptoms

In the Washington epidemic, apathy and great weakness in some cases preceded the attack for days. Irritability, perhaps with photophobia, may follow or occur independently. Coryza has been marked in some cases, generally severe ones, and has then extended throughout the period of invasion; but is not usually a marked symptom. Intestinal trouble appears to have little significance, in view of the fact that epidemics usually occur in summer when diarrhea prevails, and comparatively in few of the cases is there disturbance in the prodromal period. A significant symptom is insomnia unaccompanied by restlessness, fever or intestinal intoxication. When weakness supervenes and is followed by restlessness, poliomyelitis may be strongly suspected. If Kernig's sign occurs, especially if unilateral, or the deep reflexes diminish, the diagnosis is almost certain if one can exclude other diseases which cause meningitis. When there is profuse perspiration, without a high fever, presumption is stronger and for practical purposes the diagnosis may be made.

Attack May Be Meningeal

Of course, until paralysis is manifest, epidemic cerebro-spinal meningitis (*diplococcus intracellularis*) cannot be excluded; and it is also possible that a tuberculous meningitis may be brooding. But this question is easily decided by lumbar puncture of the meninges; and this should be done rather than lose valuable time waiting for other symptoms.

Properly performed, puncture is a perfectly harmless procedure, and is much less painful than is the injection of antitoxin, for example. It immediately shows us the turbid fluid caused by the *diplococcus* and guides us to call urgently for serum-treatment, if we find that disease. In poliomyelitis also the fluid contains an increased amount of cells and albumen; however, they cannot be seen with the naked eye, for the fluid is clear, but upon precipitation, characteristic cytologic changes are found.

The conclusions of Drs. Hough and Lefora who studied in behalf of the Washington

Committee, eleven cases of poliomyelitis anterior epidemica, are as follows:

1. The cerebrospinal fluid in acute anterior poliomyelitis is generally clear; there is in the early stages of the disease an increase of pressure, although this is not generally pronounced, and there is usually an increase of the protein-content sufficient to give a positive Nonne-Apelt and Noguchi butyric-acid reaction.

2. In the earlier stages of the disease there is more or less pleocytosis in the spinal fluid. There are many polymorphonuclear leukocytes, which are probably dependent upon the reaction of the meninges to the penteration of the virus into the central nervous system.

3. The increase of polymorphonuclears disappears a few days after the acute onset of the disease and is substituted by a lymphocytosis, with some plasma-cells and sometimes a few mast-cells.

4. The disappearance of the polymorphonuclears is brought about through the rapid and vigorous phagocytic activity of the macrophages which sometimes contain twenty or more of the polynuclear elements.

5. These degenerated polymorphonuclear leukocytes show in the framework of the macrophages very different degrees of histochemical changes (pyrominophile and fuchsinophile reaction), which are indications of rapid processes of digestion, and acquire sometimes strange forms which resemble different bodies described in some protozoan diseases. (Leishman-Donovan bodies in kala-azar, Mott bodies in blood of ox with *Yinga* trypanosomiasis.)

6. The presence of the altered red blood-cells in the spinal fluid is probably dependent upon capillary hemorrhages in the spinal cord, which is a consequence of the selective preference of the disease for the spinal vessels.

7. Koernchenzellen, altered lymphocytes and other mononuclear elements are commonly present in the fluid after this period.

8. In our histological study of the spinal fluid in the disease, we did not observe any stained bacteria.

9. The similarity of the histopathology of the spinal fluid in poliomyelitis to that of the fluid in some protozoan diseases affecting the

nervous system is argument in favor of the protozoan nature of the virus in poliomyelitis, even though some other investigators claim the disease to be produced by a very small organism.

Differential Diagnosis From Rheumatism

The error of confounding this disease with rheumatism has been possible because of the severe pain and great tenderness which occur when the meninges are much inflamed. The distinction, however, is quite easy; for in acute rheumatism the joints themselves are inflamed, and hence, are hot, red and swollen; whereas, in poliomyelitis there is no special heat, redness or swelling of the joints or limbs. Besides, there is always a modification of the reflexes in poliomyelitis; and as soon as the horn-cells of any segment are invaded, the reflex arising in that segment is first diminished and later suppressed, often several hours before paralysis occurs. When the attack is mainly on the pyramidal fibers, either in the affected segment or higher up in the cord, the reflexes may be exaggerated in that part of the body supplied by those fibers. Again, before the meningeal inflammation has extended to the cord, there may be, for a time, an exaggeration of reflex activity in general—meningismus.

The Fastigium Poliomyelitis

The fastigium occurs on the second day, when the temperature may vary from 99 to 105 degrees. A little over 100° F. is the commonest. At this time the face is often greatly flushed. Rigidity of the neck and back may be severe; hyperesthesia and even pain may be complained of; and there may be headache, vomiting, retention of urine and feces.

Lysis is usually complete about the fourth day, and is preceded by paralysis. In those cases where the patients are not paralyzed they often remain rigid for some days, walking awkwardly.

Tremor, sometimes unilateral, may be more striking than stiffness or paralysis. It is due to involvement of the rubrospinal fibers, as they pass through the brain stem or cord, where they are situated in proximity to the anterior horn.

In the early stages, hyperesthesia is the feature; but when invasion is extensive,

hypesthesia may later occur on account of the involvement of the sensory tracts in the lateral columns which convey the impulses of heat, cold and pain. When inflammation of the meninges extends to the cul-de-sacs surrounding spinal roots, stabbing pains, similar to those of *tabes dorsalis*, occur. These are paroxysmal, recurring at various intervals and lasting from a few seconds to a few minutes. But paresthesia may occur due to exudates in the spinal cord pressing upon the tracts there. These are not intermittent like the root pains; but may vary in intensity at different times.

Differential Diagnosis

Poliomyelitis may be mistaken for typhoid fever, which, however, should be excluded in most cases, by the presence of meningeal irritation. Grip of the nervous form may simulate poliomyelitis; but it rarely shows so pronounced a meningeal reaction or the irritability of the lower neurons. Moreover, the cases associated with catarrhal symptoms are usually so severe as to be easily differentiated from influenza.

Intoxication from the intestine gives rise to a stuporous condition which may cause fear of a severe poliomyelitis; however, the foul-smelling stools and the immediate relief afforded by flushing of the bowels should exclude poliomyelitis, especially if there is no retention of urine or meningeal irritation.

Pathology of Anterior Poliomyelitis

The disease is not a primary atrophy of the anterior horn-cells from acute toxemia. It is a constitutional disease due to a living virus which causes an inflammation of the connective tissues of various organs, including the lymph-glands and intestinal follicles. It is accompanied, too, by congestion of the spleen and of the mucous membranes.

The meninges are inflamed, and the whole central nervous system is more or less hyperemic. The destruction, however, vastly preponderates in the region of distribution of the anterior spinal arteries which supply the anterior cornu, the injury to the motor cells in which produces the paralysis.

Those cells around which the inflammation is not so severe as to produce more than edema quickly recover as the invasion ceases;

this accounting for the rapid return of power in some of the cases. Other cases where return of power is less rapid are accounted for by the reintegration of a destroyed axone, the pyramidal cells of which have escaped necrosis. In yet other cases it is the fibers of the pyramidal tract, as they approach nearer to the cells in the cornua, which are mainly involved, while the cells themselves in part escape. Such a case is characterized by exaggerated reflexes, and sometimes by Babinski's toe-sign.

Still another set of fibers may receive the chief impact; I refer to the cerebrospinal fibers, which also pass to the anterior cornua cells, through which they regulate muscular tonus. The loss of their influence leads to hypotonia and tremor, without paralysis so long as the pyramidal cells themselves are not implicated.

Of course, the clinical picture may vary in different parts of the body in accordance with the differing incidence of the inflammatory exudate upon different segments of the cerebrospinal axis; and in the same segment some cells may escape where others are attacked.

Etiology of the Disease

The salivary gland has been used by Levaditi to convey the disease from one monkey to another. In the Rockefeller Laboratory they have conveyed the virus by spraying into the nares an emulsion of nasal mucous membrane from a diseased animal. The most infectious material, however, is the spinal cord. The cerebrospinal fluid, however, is infective only for a few days.

Carriers of the Infection

It is believed that the disease may be conveyed by the medium of a healthy carrier. (Nebraska epidemic, Dr. C. A. Anderson; Ohio outbreak, Dr. Frost, U. S. M. H. and P. H. Service.) Some hold very strongly that abortive undiagnosed cases are responsible for the spreading of the disease so widely. If this is the case, isolation of ascertained cases must be of little avail, especially as there are other facts which seem to point to the superfluousness of isolation *as at present conceived* against this disease. An instance will make this clear.

A child eleven years of age was attacked with acute paralysis at Bethesda, Md., last

summer. She had been playing outdoors all day long for weeks with seventeen younger children, seven of whom were her own brothers and sisters. All of these were under careful observation by Dr. John Lewis, the health officer of the district, with whom I later saw the patient. Not one of these children developed any sickness which would in the least point to poliomyelitis. No contact with another case could be traced, and none of the children had been to town for some weeks. It was the first case recognized at the time in the neighborhood.

Again, in the Washington Children's Hospital, some twenty-five cases of poliomyelitis were admitted last summer, many of these being in the acute stage. They were placed in the common ward and at first no special precautions against infection were adopted. No patient in the hospital contracted the disease at that time. Latterly, spraying the nares was employed and a certain isolation was maintained, in spite of which however, I understand, one case of poliomyelitis developed later in another child soon after it had left the hospital.

I need not instance further, for the number of examples where intimate contact has not led to contagion is legion.

Evidence That the Disease is Conveyed by Direct Contagion

On the other hand, instances where known single contact has led to the disease are not lacking. The Stormsburg (Nebraska) outbreak is the most striking example; another instance has recently occurred and was observed by myself during our study of the Washington epidemic.

At McKendree, Maryland, in the practice of Dr. A. H. Perrie, the child of a railroad brakeman became febrile and paralyzed on August 1. Fourteen days before, she had visited Chesapeake Beach, to which many Washington people resort. Nine days later this child's cousin was attacked. The contact consisted of a visit to a church fair, where the children were together some hours.

In the meantime the doctor's own daughter about August 8, was attacked by the disease; and later still another family which had been in contact had one child paralyzed. In the

Washington report will appear the full history of the epidemic.

It is manifest from facts of this nature that either (1) the number of immunes to this disease is very great; (2) that certain bodily states render infection possible; or (3) that the manner of conveyance is very different from that against which precautions are ordinarily being taken by those who advocate isolation.

Proper Isolation: What Should it Be?

Proper isolation, I should say, would consist in closing the avenue of infection, and, inasmuch as we do not yet know the nature of that, only complete isolation from everything can possibly safeguard the unaffected.

It is possible that the disease is really conveyed by an insect, either as carrier or as intermediate host. No one can forget the complete failure of quarantine to prevent the spread of yellow-fever until the false belief that it was carried by fomites was supplanted by the knowledge of its conveyance by the mosquito, the *stegomyia fasciata*. Another instance is the very simple conveyance of Texas cattle-fever by the *boophilus bovis* tick under conditions formerly thought so extraordinary.

The Treatment in the Acute Stage

The medical attendant is confronted by three distinct indications, the first of which is to preserve life and prevent paralysis; the second, to relieve pain; and the third to remove residual paralysis.

1. As to the first indication—preserving life and preventing paralysis—we have as yet no certain means of accomplishing these objects; and the students of immunity are not hopeful of perfecting a serum either to arrest the disease or to prevent its inception. Hexamethylenamin has completely failed to arrest the inflammation in the cord and meninges, although it was thoroughly tested in the Washington epidemic last year.

However, there is a remedy of which we may hope that further early trial will show the value. I refer to mercury, the power of which over some infections has become better realized since it has been employed by injection into the muscles or veins.

However, I have had opportunity to test injection of mercury in but a single case of

poliomyelitis during the acute phase. It was done because of a sudden advance of acute ascending paralysis in an adult who had apparently improved on the preceding day, the fifth of his disease. Also, by lumbar puncture 10 Cc. of cerebrospinal fluid was withdrawn. Headache and nausea were at once relieved and the paralysis ceased to progress, while the temperature fell steadily. During three consecutive days, five doses of mercury bichloride were given, 1-3 and 1-4 grain alternately.

In another case of the same kind, with which I was associated, the remedy was not tried, and the disease progressed to respiratory paralysis and death on the fifth day. Both these patients were adults, seen in consultation, the first with Dr. John Lewis of Bethesda, Md., the second with Drs. A. B. Hooe and Roy of Washington.

It is true that the injections of mercury would greatly perturb a child which is hyperexcitable from meningitis; but a temporary disturbance is preferable to paralysis or death, while much less pain is produced by the small needle required than when diphtheria or meningococcus disease are in question.

If the disease is protozoal, the rationale of mercury medication is evident; and it is possible, too, that some arsenical derivative may be applicable.

Many have recommended cupping and other derivative methods to prevent spinal hyperemia. The rationale of this is at least doubtful when we remember that the hyperemia is nature's defense against further invasion.

Special indications requiring attention are the constipation and retention of urine, which should be met by copious enemata; not by drugs designed to stimulate peristalsis, which is deficient—not because of local toxins, but because of interference with innervation at the center. Sometimes a catheter is required, but usually a flow from the bladder will follow a third or fourth enema, the first, indeed, often failing to expel any feces.

Pain and Irritability

II. The second indication is to minimize the pain and irritability of the attack and to secure rest and sleep.

For the purposes named, the warm bath or wet-pack is most efficacious in some cases. It not only acts as a revulsive to soothe the nervous system and tranquilize the circulation by its warmth, but it has the mechanical function of supporting the limbs so evenly that there is no drag to stimulate afferent nerve impulses to add to the irritation due to the meningomyelitis.

Other measures which secure the same end are the water- or air-bed; maintenance of the limbs in a semiflexed posture by soft pads, and support of the feet by a firm one. Support of the back by a firm cushion, well warmed and not too hard, gives great relief, while the proper adjustment of the pillow under the neck is of much importance. An ice-cap sometimes causes considerable distress, and its use has no justification except the thoughtless routine of orthodoxy. An immobilizing jacket has been of great service in giving comfort to some little patients. It should be used always during the acute phase when pain is severe.

Galvanism is Useful

Finally, after the inflammation has subsided, usually in about a week, galvanism should be employed as a direct means of diminishing the pain, which is derived from the stretching and sagging of joints, ligaments and muscles caused by the loss of tonus in the muscle groups paralyzed, sometimes aggravated by hypertonus of antagonists not paralyzed. The relief given in this way is surprising to those who have not tried it.

To illustrate: One adult patient, seen with Dr. Ammerman of Washington, would gain a tranquil repose of over two hours after half an hour's application of galvanism to his paralyzed muscles. At other times restlessness and pain were so great that only by morphine could any sleep at all be secured, and his day was a perpetual misery. The hot bath was unavailable at that time.

Treatment of Residual Paralysis

III. Little children are reluctant to essay movements of a partially disabled limb. When it is an arm, they let it hang and use the other; if it is a leg, they make no effort, preferring to be nursed and waited upon.

Suspension in water greatly facilitates movement when the muscles are feeble. We

in Washington can fully confirm the experience of the New York Committee, which found out how easily a child in a bath could accomplish little movements which it was unable to attempt, even, when its limb was not so supported; and it is very easy for the mother or nurse to invent little play-games to maintain the child's interest for an hour at a time while suspended in a warm bath. There is no danger in this so long as the water is maintained near blood-heat. The skin does not macerate and the effect upon nutrition is most favorable. To stimulate the circulation in the limbs they should be gently massaged several times a day.

Galvanism for Residual Paralysis

But from this hydiatric procedure one must not expect to procure regeneration of atrophied muscle or nerve. Surgeons know well that the muscles supplied by a cut nerve will atrophy and will not regenerate although they may be massaged till the end of life.

If, on the other hand, these severed nerves are galvanized from the beginning, atrophy will not occur, for the exercise of their contractile functions maintains the integrity of the muscle-elements; and it is only galvanism which can excite contractility when the motor nerve and its endings have degenerated. If treated by galvanism from the beginning, a living muscle-cell will greet each regenerated nerve-fiber which pushes to its destination. If galvanism is not used, the envelopes of only dead muscle-spindles will be encountered. The time for these to regrow, must, then, be added to the duration of every case not treated by galvanism.

It is necessary to restate these simple physiological facts on account of the vogue of the pernicious statement that no treatment of poliomyelitis should begin until four months have elapsed. This doctrine is another instance of unthinking orthodoxy. But if the elementary physiological considerations just presented make no appeal, I need only cite the high authority of Erb, Bergonie, Zimmern, and Zappert, the latter the distinguished Viennese pediatrician (added to that of Duchenne's final experience) who makes a practice of galvanizing the paralyzed muscles just as soon as the active symptoms subside.

The galvanic current should be applied only to those muscles which are paralyzed; and the negative pole should be placed over the muscle itself near its tendon of insertion, while the positive pole should be attached to a large electrode, applied over the abdomen or other indifferent point. It is useless to stimulate the motor point except during the first two weeks, that is, before any nerve-endings have ceased to be stimlatable on account of degeneration.

Of course, contractures and other deformities should not be permitted; and even when paralysis is complete and irremediable they can be mainly prevented by the maintenance of proper posture. Orthopedic expedients are too often the resort of despair and the result of neglect in providing proper and early treatment, but when necessary the weak or atrophying muscles may be reinforced with advantage by elastic suspenders.

The Danger of Routine Practice in Senile Cases

By I. L. NASCHER, M. D., New York City

ROUTINE is the bane of medical practice. The artist falls into a certain style, and whatever his subject may be his style is there. The mechanic and the professional man gradually acquire routine habits in their work. The writer is recognized by the style of his writings, the preacher by the character of his sermons.

In like manner the physician falls into a certain routine in the method of diagnosis and treatment of diseases; he has his favorite operative procedures, his favorite drugs and prescriptions, his favorite method of meeting emergencies, even a favorite "cause of death." My gynecologic friend says it requires an effort to refrain from asking questions about menses and childbirth when examining a male patient, and my neurologic neighbor looks for a mental or nervous taint when treating an ingrowing toe-nail.

No harm can result when a routine method is so broad as to include possible as well as probable conditions, as for instance when a physician makes it a rule to examine the heart and lungs in every case, although there be no symptom pointing to their involvement. But no routine practice that may be followed in maturity, whether in diagnosis or treatment, will avail in senile cases, while, contrarywise, the methods employed successfully in maturity often will be detrimental in senility. In maturity, nature cures, and our efforts are directed to aid nature; in senility, nature kills, and so the same measures which aid nature in maturity aid nature in senility in hastening death.

We must remember that senility is a physiologic entity which must be considered entirely apart from maturity, that pathologic processes act differently upon the senile degenerating tissue than upon the tissue of maturity, present a different clinical picture, follow a different course, and require different treatment.

In taking up the prominent symptoms of a senile case, we must remember that the manifestations of the normal senile changes may be so pronounced as to mask the symptoms of a grave disease, that the symptoms often are misleading, and that any routine practice of forming a diagnosis from symptoms alone will lead to error.

The selection of drugs is the most difficult problem we have to deal with, not only in senile cases, but in the whole realm of medicine. Our knowledge of drug action is purely empirical, and the differences of drug action upon the healthy tissue of maturity, the senile degenerating tissue, and the tissue involved in a pathologic process, have not been studied. That differences exist, is unquestioned. I have frequently been disappointed in the action of drugs in senile diseases that were almost as reliable as specifics in the same diseases in maturity. The scope of this paper precludes a lengthy discussion of this factor in the treatment of disease in senility.

In dosage, we have the old dictum that children and the aged can not bear large doses, and physicians follow the routine practice of diminishing the dose of every

drug in old age, without system or reason. Yet many drugs must be given in larger doses in old age, to be effective—as can readily be determined by following the dosimetric plan of giving drugs.

Let me cite a few instances to show the dangers in following routine practice in treating the aged.

An Illustrative Case

Case 1.—P. G., age 68, saloon-keeper. About a year before I saw him he had been treated for kidney and heart trouble; he had a chronic cough, was short of breath when going up stairs, was habitually constipated, and had frequent headaches, especially at night after serving many liberal customers. Three days before I saw him he went to bed, saying he felt weak and sick all over.

There was no other pain than the usual headache; there was no chill, the skin was not hot, there was no excessive thirst; urine was scanty, but no difficulty in voiding it. He had taken a cathartic the day before I was called, as he had no appetite, and the family thought he had a "spoilt stomach." They told me that he had frequent weak spells, but these generally passed off in a few hours. This was all the information I could obtain.

There was not enough of a definite character to form even a conjectural diagnosis, the subjective symptoms pointing in many directions. The pulse was irregular, weak and beating between 85 and 100 a minute; temperature, 99.2° F. One single symptom, hardly noticeable on account of the dyspnea and shallow breathing, gave the clue to the probable diagnosis; the respiration was 24 a minute. My diagnosis of bronchopneumonia was confirmed by the physical signs, which also revealed a mitral obstruction.

The patient's condition remained unchanged for two days, but on the third day (the sixth of the disease) there was rapid prostration; slow, shallow breathing; pulse almost imperceptible; heart fluttering—the *tout ensemble* of collapse.

Following the routine practice in such cases, I gave whisky and a hypodermic of 1-100 grain of digitalin. There was immediate response, the pulse becoming stronger and steadier; however, after a few moments

there came a different, disastrous change. The face became flushed, there was a convulsive stiffening of the limbs, unconsciousness supervened, there were a few stertorous breaths, the head fell to one side—and all was over.

Textbooks are Unreliable

The history of this case is given to show the unreliability of textbook descriptions when applied to senile patients.

The essential point to be emphasized is the danger of giving digitalis, its active principles or other vasoconstrictors in threatened heart failure in the aged. This patient died from apoplexy, the result of a ruptured atheromatous cerebral artery, following the use of digitalis which, while increasing the force of the cardiac contractions, diminishes the caliber of the arteries.

Case 2.—Mrs. B. H., age 74. Answering an emergency call, I found the woman in the intense agony of gallstone colic. Her regular physician had left some medicine, of which she had taken a few doses but without obtaining relief. I gave 1-8 grain morphine hypodermically and she became quiet within a few minutes. An hour later she was found dead in bed. Her physician informed me that his medicine contained morphine in 1-8-grain doses; also, that she had chronic gastritis.

Some physicians make it a practice to give morphine hypodermically whenever there is pain. If quick action is required in persons of old age, morphine should always be given hypodermically and then in one dose sufficiently large to be effective. The danger of divided doses given by mouth arises from slow absorption and consequent cumulative effect.

Opium and its preparations inhibit intestinal peristalsis, and as peristalsis is already diminished as a result of the senile processes, if the drug is not readily absorbed it accumulates and we are liable to get the effect of the combined doses, exactly as happened in the case recorded.

Just a word about the action of opium and its salts in the aged. Opium should never be given in old age because it is slowly absorbed and it lessens the already diminished intestinal peristalsis.

The great danger in giving morphine is the depression of the respiratory centers, which, however, can be counteracted by combining it with atropine. With this precaution, morphine may be given in full doses.

A Case of Chronic Asthma

Case 3.—B. M., age 60, butcher. Suffered for years from bronchial asthma and found relief from inhalations of the fumes of stramonium, lobelia and saltpeter. I put him on the routine belladonna treatment, following Von Noorden's method of starting with atropine in 1-300-grain doses twice daily and gradually increasing the dose and its frequency. Two weeks later, when taking 1-120-grain doses, he complained of pain and pressure over the bladder and difficulty in urinating, with scanty urine. The catheter was used to relieve an overdistended bladder and the atropine was temporarily suspended, whereupon the atony of the bladder slowly disappeared, but returned when the atropine was resumed.

In an earlier case, in which there were, beside the bronchial asthma, a dilated bladder, an enlarged prostate, and atony of the sphincter, the belladonna treatment cured the asthma, but it produced a complete permanent atony of the bladder, entailing the use of the catheter during the remainder of the patient's life.

The essential point in this latter case is the importance of considering the secondary effects of drugs in old age. Belladonna has a pronounced sedative effect upon the terminal nerve-fibers of nonstriated muscle, and this gives it its value in spasms. But this same property contraindicates its use in the constipation of the aged, as this is generally due to lessened peristalsis from atony and waste of the muscular fibers of the intestines.

The belladonna in the popular aloin, strychnine and belladonna pill, which is given to counteract the griping effect of the aloin, at the same time counteracts the effect desired, namely, to stimulate the muscular fibers to peristaltic activity. Belladonna, moreover, has another undesirable effect in the treatment of senile constipation; it lessens the intestinal secretions. The routine treatment of constipation along the lines

followed in maturity will invariably fail in senility, as the causes and conditions are different.

Danger of Enemas

A moment's reflection will show why enemata, which distend and weaken the lower bowel, should never be used.

So, also, laxative salines should be avoided because by their osmotic action fluid is withdrawn from the vascular system and into the bowel and so voided with the feces. The increased viscosity of the blood, the dryness of the skin and diminished secretions should indicate to the thoughtful physician that the fluids of the body are deficient in old age and that the individual can ill bear further depletion. The saline laxatives may be used with advantage in the obese or for occasional variation from other cathartics, but they must be given in small doses well diluted, preferably in hot water.

[This advice does not agree with that of Burggraave, who especially advised the use of the dosimetric "sedlitz" (an effervescent magnesium sulphate) which he took every day of his life, up to the day of his death, in his ninety-seventh year. The salines should of course not be taken when the body is markedly deficient in fluids, especially if there is meagerness of flesh.—ED.]

There is a special danger in old age from the routine practice of giving hypnotics for insomnia. The aged frequently complain that they cannot sleep more than a few hours at night. In most instances this is not true insomnia, however, for while the individual does not sleep more than a few hours at night, he dozes off frequently during the day, takes a nap after meals, and on the whole he gets more sleep than he requires. Often his naps and dozes last for hours, although he imagines that he slept but a few minutes. Hypnotics are frequently prescribed in these cases, when, in fact, they are unnecessary.

Chloral is dangerous in old age on account of its depressing effect upon the heart if given in therapeutic doses. If a hypnotic is necessary, a hot bath should be tried; if this is not effected, veronal may be given. If the insomnia is due to mental agitation—

a frequent cause in old age—monobromated camphor should be added to the veronal.

This paper is intended to be merely suggestive and not dogmatic. The routine practice of making a thorough examination in every instance, looking for possible diseases which do not present marked symptoms, as well as for those in which pathognomonic symptoms are evident, is a good routine practice in old age. But the practice of treating diseases along routine lines, ignoring the factor of age, except perhaps to the extent of diminishing the doses in a haphazard manner, is wrong. This is not dogma, but common sense.

If the final cause of death in every case of an aged person be analyzed and traced to its original cause, it will be found that

many deaths are due to improper treatment, to the routine practice of treating a disease in old age as we would the same disease in maturity. Case 1 is an example of this.

We may ease our conscience by the thought that the old patient would have died anyway, that he was a burden to himself, his family and the state. All the same, these moral evasions do not excuse our ignorance or neglect of the cardinal principles of Geriatrics, namely, that senility is a physiologic entity to be considered apart from maturity, and, further, that senile diseases are diseases *sui generis*, differing from similar diseases in maturity in the action of pathologic processes on senile tissue, in symptoms, signs, course and as to method of management

Whom Shall I Serve?*

The Doctor's Duty to Himself and Family—and to the Deadbeat

By N. C. MILLS, M. D., Big Run, Pennsylvania

EDITORIAL NOTE—In the January and February numbers of this year we published two articles By Dr. Sayers, telling of the work of the Redbank Physicians' Protective Association. Dr. Mills's article is a further development of the ideas presented in those two papers. It is a strong plea for self-protection on the physician's part; for clean, square, effective business methods, based upon professional cooperation. Every physician should read it.

I AM fully convinced, and know that you will agree with me before I have finished, that the Punxsutawney members of this Association could have chosen a more able representative on this occasion. It so happens that I was the first member of our local association to receive any financial benefit from the organization. On this account I was singled out as their representative to you and for this same reason I accepted the honor, not that I can do it justice, but because I already feel indebted to the Redbank Physicians' Protective Association and desire to aid the cause.

This subject of service to our fellow men is one upon which volumes have been written. From the time of Hippocrates to the present age we, as physicians, have rendered our full share of service to mankind.

The meaning of the French phrase, "*Noblesse oblige*"—rank imposes obligations—

has never been lost on the great body of physicians who have preceded us. It was born with the Father of Medicine, Hippocrates, and has been carefully nursed, rocked and nurtured ever since. From a lusty infant in his time, it has grown to full-fledged manhood. It makes its demands and will always get its just dues from us. A half century ago in this country these demands were exorbitant, yet our predecessors, amid unknown privations, fulfilled their duty.

Twenty-five years ago we began to demand some fair recompense for service, and only in the last ten years have we awakened to the fact that we have been imposed upon. As long as our profession exists the spirit of *noblesse oblige* will not die, actuated by the inborn spirit of humanity and that of the Golden Rule. For the love of their work and their fellow men, hundreds of our calling, both humble and great, have given up their

*Read before the Redbank Physicians' Protective Association.

lives—"and greater love hath no man than this, that a man lay down his life for his friends."

The nobility of our service is recognized by every earnest practitioner. We leave medical school with nothing but bright ideals, although later, in the University of Hard Knocks, they lose some of their lustre. The lives of such men as McLaren, William McClure, Carroll, Kassabian and many others spur us on and make us proud of our Mistress. Year after year our members sacrifice life and limb to their calling. We leave in our wake martyrs to plague, fever, infection and the modern x-ray.

Truly, our position imposes many obligations, but, while we are physicians, we still are, or should be, men. As men we have our rights; as physicians, we desire them. As physicians we ought never to neglect the financial side of our profession. We have rights as physicians that in the past we have neglected to bring to the public eye. For every martyr in our profession we can find scores of women—good, cultured mothers and wives—condemned to lives of genteel poverty, widows left with a home, perhaps, and little else, except the ill-kept books of the late lamented "Jones, M. D."; children deprived of an education, and orphans left to the mercy of a none too gentle world, not because their fathers didn't earn enough, but because they did not, or probably could not, collect their just fees.

The Doctor's Income Small

Our profession has been crowded. "At the best," as one man has said, "our incomes are limited. The income of medical men does not compare with that which can be earned by a man in commercial life, who can employ a multitude of clerks and hands to increase his profits from his business. A doctor has to do everything himself and cannot delegate much of his work to assistants, with advantage. For this and many other reasons he is not likely to be a man of wealth."

There is little chance of accumulating money from the practice of medicine. A small competence can be saved by diligence, frugality and good management. It is estimated that the average earnings of physicians is somewhere between seven hundred

and one thousand dollars per year. This, I believe, is a low estimate in this locality. Suppose we say the average is between \$1200 and \$1500 per year; then it is evident that the man who earns \$1200 gets very little for what he does, considering the time spent and the amount of money invested in his education and equipment.

Others say of us, "Doctors are not good business men." Very few of us are, and we have to admit the fact. First of all, no man with good business instincts and a desire to accumulate wealth would enter our profession under present conditions. The best we can expect of it is a handsome income for a few. A competence for many and a mere pittance for the great majority—such are the pecuniary rewards which medicine offers its votaries.

If the average doctor had expended as much time in preparation, invested the cost of his education elsewhere and worked as many hours a day as he does, in any other business, he would either be considered unfortunate or a fool if he did not accumulate a competence at least.

This is all wrong. Why should we not all be men of comfortable means, if not wealthy, as well as men of ability and education? We are the laughing stock of the business world with our poor business methods. If any doctor who attends to his practice could collect the money due him with as little loss as would be tolerated in a well-conducted business house he would be in comfortable circumstances financially.

"Booking" Versus "Getting"

We customarily speak of what we book and what we get as two entirely different things. A doctor says: "I am hard up; I have not been collecting over \$150 a month, but I am booking over \$500." A business man who would make such a statement would expect it to cause lack of confidence in him in business circles and would see financial ruin staring him in the face. To whose door can we bring these conditions? To our own *alone*—and these are plain, hard facts.

There is, however, a remedy. Recently a new idea has been broached and that, if applied, will help us: this is that "coopera-

tion, and not competition, is the life of business." Let us not forget to apply it to this question.

Whom have we served in the past? Truly, their name is legion. We have served alike the rich and the poor, the deserving and the unworthy, the saint and the sinner, the prompt and the tardy, the grateful and the thankless, the honest man who pays in cash and the deadbeat who pays in slander. What has been our reward? A handsome income for a very few, a modest competence for many, a mere pittance for the great majority. The rich have paid us—often grudgingly, the poor have blessed us and damned us. We are open to the criticism and comment born of ignorance and superstition always. We have derived a pleasant satisfaction from befriending the worthy and have left the door of the unworthy with murder in our hearts.

The saints have blessed us and promised to intercede for us with good St. Peter. We may need their help at the gates, but it does not aid us materially here. The sinners we are prone to let off easily. Most of us are in their class. The honest man, rich or poor, is our only friend, the deadbeat, our worst enemy. A dog will lick the hand that feeds him. The deadbeat, like the wolf, hunts in packs and tears your reputation to shreds after you have befriended him.

Gratitude is Shortlived

"Man's inhumanity to man makes countless thousands mourn." Human gratitude is short-lived at best. "When the devil was sick the devil a monk would be, when the devil was well, the devil a monk was he." All these we have served in the past. Whom shall we serve in the future? "The laborer is worthy of his hire!" You and I deserve a just recompense for our services if the public hire us. For centuries past the laity, secure in its erroneous belief that we are compelled to serve them if called upon, with or without recompense, has had us at its beck and call.

Since 1587, when a Dutch painter and engraver published his series of four engravings depicting the attitude of patient toward physician, there has been no change. The

Latin inscriptions underneath these plates are worth repetition in free translation:

When the sick man lies abed distraught with pain
And dismal death is clutching at his throat,
He likens me to *God*, and all his house
Kneel down and do me reverence.

When easier lies his head and icy death removes
His hand and warm the blood rebounds,
He blesses me as messenger of *God*,
And holy *Angel* from ethereal high.

But when the full and rosy touch of life
Bestirs his flesh and puts his soul to sleep,
He greets me as a *Man*, tho' one of might
And versed in all the wisdom of the world.

And then at last, when recompense is asked,
He passes me in dread, for lo! to him I stand
A *Devil* horned from out the lowest depths.

So the Dutchman depicted us over three centuries ago to our patients, as *God*, *Angel*, *Man*, and *Devil*, and today their point of view remains unchanged. Whom do the other professions serve? Whom does the minister, the lawyer and the dentist serve? Whom does the business man, the merchant, the butcher, the baker, the candle-stick maker serve?

Elbert Hubbard classes us with the clergy as parasites. Since we come under the same head, compare the compensations we each receive. Whether a clergyman draws a salary of \$800 or \$5000 a year, he generally gets it. He works much or little, as he chooses, and where will you get one who will not leave an \$800 church to accept one which pays \$1000 or \$1500 for his service as a sign-post to point the way to heaven?

How many criminal lawyers have we practising in our courts today for the sake of defending the poor wretch without money? What one so doing would not gladly sell his services to the corporation offering the highest salary?

Do our dentists replace the decayed molars and incisors of the general public with the best bridge-work unless they are sure of their pay beforehand?

A Bad Motto—And a Good One

"Do your duty and then collect your money" (if you can) has been our motto. "Be sure of your money before you deliver the goods" is the motto of the business man, the banker, the butcher, the laborer, the farmer. Why should we not adopt it? Not

only are we poor collectors, but we seem to encourage an expectation on the part of the public that we shall always be so. We even sneer at the colleague as a close-fisted, penurious cuss, who is a good collector. Some of you may deny it, but so inbred is our lack of business sense that deep in your hearts you condemn the business-like doctor and in the same breath damn the laity for not paying you.

By poor business methods, by not sending out our bills promptly and making every effort to collect our just fees, we have directly encouraged the individual whom we are now working to reach. Our campaign at present will prove a liberal education to him in honest and right living. Any right-thinking man, any honest man will applaud and heartily approve our purpose. On the other hand, there will be some—even among the profession—who will deem us lacking in sympathy, condemn our methods as being too drastic, and frown on the Redbank Physicians' Protective Association as any fresh innovation is frowned upon.

The laity expects much of us nowadays. The only way we can satisfy their expectations, keep up to date in literature, equipment and newer, better methods, is to show them that we, in return, expect a prompt and just recompense for our service. Let them

know that we are not only progressive physicians but progressive, live, up-to-date business men as well.

Farewell to the past with its encouragement of the deadbeat, the man who pays tardily, the man who always expects you to discount his bill, and the one who wants to trade "truck for truck," as he expresses it. Welcome the bright future, when we shall work for two classes only, to wit, the abject and deserving poor, and the man who pays promptly and in full, with no questions asked.

Let us be careful in our charity, lest we cast our pearls before swine. Something for nothing is rarely appreciated. Remember, we are men first, physicians after that. We have duties to ourselves, our families and our profession, as well as to mankind in general. Our noble profession has never failed in the latter duty and it never will—actuated by the spirit of our predecessors and preceptors. But we must become more proficient business men to become more efficient physicians, and we must raise its standard to a higher level before the public.

First, get the attention of the public, then gain its respect, and finally end by getting the recompense which you have honestly earned, when you want it, and accept no counterfeits.

The Action of Chromium Sulphate in Prostatic Disease

By HENEAGE GIBBES, M. D., L. R. C. P. (Lond.), McAlester, Okla.

CHROMIUM SULPHATE as a therapeutic agent has recently made its appearance in medical literature, and unusual claims have been made for it by some writers. However, experience with this drug has been so limited in time that it is impossible as yet to explain the rationale of its undoubted beneficial action, and so I must content myself for the present with a description of what it has done in my hands.

In the first case in which I tried the chromium sulphate, I used it in combination with calcium sulphide, and then I got results

that proved to me that either calcium sulphide was accomplishing more than it had ever done before or that the other remedy was taking a hand in the work.

The case was that of a man of seventy-four who had led a more or less reckless life in many different countries, from the Arctic Ocean to the tropics, and who had a history of numerous infections of gonorrhea, but absolutely none of syphilis. He was a man of some education, so that one could form a pretty fair idea of when he was speaking the truth.

The first trouble had been an acute urethritis, for which he had been treated and, as the doctor told him, was cured. But after some time he noticed that the stream of urine gradually grew smaller and he began to experience pain in the perineum and at the end of the penis. This not ceasing, he went to a doctor, who gave him an injection, which soon brought things to a climax.

Pain Develops During Urination

He came to me with the following history and present condition: After using the injection for two days the pain became so intense that he had to stop it. That morning he was urinating, when the stream suddenly stopped, and he suffered the most excruciating pains until he passed a quantity of blood followed by a lot of pus. When he got rid of this, he felt considerably easier, but was so scared that he laid off work and came to me. I found the prostate very much enlarged, and it had a baggy feeling and gentle pressure brought away more pus. The man absolutely refused operation.

I gave him, at once, my old standby, blue mass, rhubarb and ipecac, to be followed in six hours by a large dose of saline laxative. I also gave, every four hours, six granules of calcium sulphide with one of the dosimetric trinity; also some formin for probable sepsis. I suspended the testes, and told him to lie down all he could until I came next morning. I ordered avoiding of solid food, warm rice, water to drink, and besides gave him one granule of H-M-C, modified, with instructions to take the tablet after he was in bed and ready to go to sleep. Next morning I found great improvement. The medicine had acted well, the prostate was decidedly smaller, there was no pus, and the heat and pain had disappeared.

This seemed to me to be the time to try chromium sulphate. I reduced the calcium sulphide, and gave 4 grains of chromium sulphate three times a day, keeping the intestinal canal free from accumulations with saline laxative. After two days the calcium sulphide was stopped and the chromium sulphide increased to 8 grains after each meal and at bedtime; also one dose of blue mass, rhubarb and ipecac, in the week, and

a small dose of saline laxative every morning.

The condition now, after four weeks, is this: The prostate is down nearly to normal; there is no hesitation about micturition and the stream is fairly large. The man's health is better than it has been for months, but there is a small bridge-stricture, and I feel certain that if this is not attended to, a woman with a bad chronic leucorrhea would set up an attack of acute urethritis and most of the trouble would recur.

The Two Following Cases

In my next two cases there simply was a gradual increase in the size of the prostate and encroachment on the urinary passages to such an extent that the victims had entered upon a catheter-life, a condition when it seems to me to become a question whether life is really worth living. Here the effect of chromium sulphate has been remarkable, one of the patients having entirely given up the use of the catheter, and the other hoping to do so before very long. In each instance the prostate has become much reduced in size, and I particularly noticed the loss of that hard, brawny feeling which was very marked in one of these cases.

Now I am waiting for an opportunity to get hold of a prostate gland that had been influenced by chromium sulphate, and make a histological examination, as I am not clear as to what part is being acted upon by the chromium sulphate, considering the large amount of nonstriated muscle there is in this organ. I think it is important to find out on what tissue the chromium is acting, as it may possibly be applied to a different condition in some other part of the body where the tissue for which it has a special affinity exists in large amount.

I have another case in which the diseased prostate responds to the chrome treatment. This is one in which I am especially interested, as I have been able to examine the patient closely and constantly. There had been two abscesses, about three months apart, which had both ruptured into the urethra, each time the patient suffering terribly, and I was kept in constant dread of septicemia. I had been treating, each time, with calcium sulphide and formin. When

the acute symptoms had entirely subsided I made a very thorough examination of this patient's urine, blood and everything, to establish his present condition, so that I could determine when there was any indication of a commencing departure from what I considered, in his case, to be the normal condition. He improved in every way, gained weight and appetite, hemoglobin percentage became nearly normal, micturition was in a steady flow, though small; altogether the man was in as good condition as I expected he ever would be.

This went on for nearly three months and I hoped it would continue. It did not, however, for he came to me and said he had a pain in what he called "no-man's land."

I found, on inspection, a swollen prostate, hot, sore and throbbing. I gave him an alterative pill at once, to be followed in six hours by a double dose of saline laxative. I ordered suspension, fomentation, etc., and then I determined to try chromium sulphate, at the beginning with the calcium sulphide.

I gave 6 granules of calcium sulphide (gr. 1) with 4 grains of chromium sulphate, to be repeated in three hours. I purposed making a thorough examination six hours after the first dose. Blood examination showed hyperleukocytosis, mainly polymorphonuclear, but some large mononuclear cells were present. I never tried to find out what had caused this change, and after a

good deal of circumlocation I found that ten days before he had accepted an invitation to a Dutch supper where he had imbibed a quantity of lager beer, although strictly forbidden to take beer of any kind. He said he felt so well after that, he continued the lager beer until the day before he came to me, when he began to feel some of the sensations he had experienced before.

Six hours later I found some improvement, the throbbing had ceased and the tense, hot feeling was much reduced; altogether, I found a condition where I felt I could gradually reduce the calcium sulphide and increase the chromium sulphate, which I did until twenty-four hours later, when he was taking 8 grains of chromium sulphate three times a day, and no calcium sulphide. He is, in fact, back nearly to the condition he was in before the Dutch supper got in its work.

I shall watch this case closely, as I think it will show the value of chromium sulphate in these conditions. So far it has done well in my hands, and I cannot see why the good done should not be permanent. We cannot tell yet exactly what it does or on what tissue its influence is exerted, and I am waiting anxiously to get a prostate that has gone through this treatment. One thing is quite plain to me, and that is, a man about sixty should never tempt his prostate with a Dutch supper.

THE FIGURER

This world contains a lot of folks

Who fret us more or less

By poor or misdirected jokes

Or ill-timed seriousness.

But he who brings the deepest doubt

Is that unfaltering one

Who gets a lot of figures out

To prove "it can't be done!"

The proudest schemes of progress fall

And shattered hopes lie thick,

When calmly he proceeds to call

On his arithmetic.

More hideous than the vandal shout,

His voice spoils all our fun,

When he brings rows of figures out

To prove "it can't be done!"

Your plans of glory, though they be

Both lofty and immense,

Will shrivel like a leaf when he

Says, "Think of the expense!"

He's Disappointment's special scout

And Hardluck's favorite son,

This man who gets his figures out

To prove "it can't be done!"

Appendicitis: A Preliminary Review

By BENJAMIN H. BREAKSTONE, B. S., M. D., Chicago, Ill.

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Mary Thompson Hospital; Attending Surgeon, Jefferson Park Hospital.

EDITORIAL NOTE.—This paper is a part of Dr. Breakstone's interesting series on "Every-Day Surgery", which has been running in "Clinical Medicine" for several months. The Doctor discusses the surgical diseases in which the general practitioner is most interested, and describes methods that the "every-day" man can use. Most of the operations described can be performed under local anesthesia, in the doctor's own office. These papers will ultimately be reproduced in book form, at a very moderate price. Those interested are requested to communicate with The Clinic Publishing Company.

BEFORE going into a discussion of appendicitis proper, it seems to me advantageous to go briefly over the anatomy of the organ, and also its adjacent parts.

The appendix is a small, narrow, blind pouch, varying greatly in size as to length, caliber, thickness of its walls, etc., in different individuals. It is a continuation of the gastrointestinal tract, and therefore is made up of the same structures as the intestine, namely: an inner lining of mucous membrane of epithelial cells; a submucous coat, containing glands; a muscular coat; and a peritoneal covering, or serous coat. This organ arises from the most dependent portion, or nearly so, of the cecum. Its caliber is conical, that is, it is smaller as we approach its distal end, it is two and a half to six inches in length, and normally is perfectly movable. It is well to remember this latter point, as many vaguely located pains can be explained by remembering the motility of this organ.

The appendix is comparatively useless. In the lower animals it is the location of their second stomach, being rudimentary only in man. This organ, more than any other in the body, proves the Darwinian theory of evolution, for in each succeeding generation it is found to be smaller and smaller, and two persons were recently operated upon by prominent European surgeons in whom no appendix nor any trace of one was found. (*Virginia Medical Semi-Monthly*, Michaux, Sept. 12, 1903.)

The appendix is situated in the right iliac fossa. The proximal end is at a point midway between the anterior superior spine

of the ilium and the umbilicus, technically known as McBurney's point. This location was first described by McBurney, of the Roosevelt Hospital of New York, who was one of the surgeons attending on the late President McKinley, and who was also called to operate upon the late President Harper, of the University of Chicago.

The function of the appendix is unknown, but it probably secretes a lubricating fluid which it throws into the cecum to aid in the propulsion of the feces into the ascending colon.

The range of motility of the appendix is equivalent to a radius of from two to six inches with McBurney's point as a center. This is very important to remember, and will also explain many of the vague locations of pain in appendicitis.

Definition and Varieties

Appendicitis, as the term naturally suggests, is an inflammation of the lining membrane, primarily at least, of the appendix. Like all other inflammations, this inflammation may be acute or chronic, suppurative, perforative, gangrenous, catarrhal, and tuberculous.

Most of the cases that come to the physician are acute. In more than five hundred autopsies, every appendix, even though macroscopically normal, microscopically has been found to have been inflamed at some time or other, whether the subject had had symptoms of appendicitis or not. Therefore, an acute appendicitis can only occur in an appendix which has previously been chronically inflamed. Tuberculous appendicitis is almost always secondary. Catar-

rhial appendicitis is the recurring appendicitis of some authors, and is the one which gives the most encouragement to medicinal treatment. Suppurative, gangrenous and perforative appendicitis are always none other than surgical diseases.

Etiology of Appendicitis

Appendicitis may occur at any age, but most usually it occurs in adults between the ages of 20 and 35 years. It occurs in both sexes, but the majority of cases are in the males. Climate, environment, season and altitude have very little influence on the etiology of this disease.

The exciting cause is unknown, but constipation undoubtedly plays an important role, the reason for which can be anatomically explained. In constipation the feces fill up the entire colon, with practically no peristalsis; and as there is no reverse peristalsis (and even if there were, the ileum is guarded from a reverse movement of the feces by the ileocecal valve), the cecum dilates, this also causing the opening of the appendix, which is a continuation of the former, so that feces enter the appendix and there act as an irritating foreign body. The appendix having little or no peristaltic movement, is powerless to expel this foreign body, and appendicitis results.

Authorities differ as to this explanation, many having no regard for this foreign-body theory at all. It is my own personal opinion, however, that if there were no constipation there would be no appendicitis, excepting that which is caused by traumatism or an inflammation by extension from adjacent organs, or by tuberculosis, etc.

Symptoms of the Disease

The symptoms of appendicitis may be briefly enumerated as follows: (1) Headache. (2) Nausea. (3) Vomiting. (4) Constipation. (5) Pain in the right iliac fossa. (6) Tenderness at McBurney's point. (7) Rigidity of the abdominal muscles on the right side. (8) Fever and rapid, wiry pulse, anxious countenance. (9) Pallor. (10) Leukocytosis.

The patient usually lies in bed on his back, with the right thigh or both thighs and legs flexed to relieve the tension in the abdomen. He also places one or both hands over the

region of the appendix, exerting pressure and imparting heat to the part in the hope of obtaining relief.

The symptoms I have mentioned may not all be present, or they may be present in varying degrees of intensity. We will now take them up one by one.

Headache is usually present and often is very severe. However, in many cases, especially in the mild ones, it may be slight or even absent. Nausea and vomiting are present, especially in severe cases or in cases following a long period of constipation. This symptom, however, may also be absent in some cases. Constipation is present in nearly all cases. However, there may be a diarrhea just preceding the attack.

The symptom which brings the victims to the doctor is pain in the right iliac fossa. This is one of the characteristic symptoms. It is very severe in acute cases, but only slight in catarrhal cases, and comes on suddenly. The pain, however, may be anywhere in the region of the appendix. For, as the appendix is a movable or floating organ, it is plain that the pain may be felt at any point within a radius of two to six inches from McBurney's point, while very often being felt on the left side or back of the cecum or in the region of the kidney, gall-bladder, or ovary or fallopian tube, etc.

The Characteristic Local Tenderness

The most reliable symptom, however, is tenderness at McBurney's point. The way to elicit this tenderness best, is to put the palm of one hand over the right iliac fossa and exert gentle but firm pressure, then with the index-finger of the other hand endeavoring to detect tenderness at or about McBurney's point. The abdomen in most cases is very tender, at all events, but if one follows this method, he can detect this especial point of tenderness in every case. This tenderness, of course, varies in degree in different individuals, but is usually quite marked.

There will be no trouble in finding the rigidity of the abdominal muscles on the right side, especially if compared with the left side. Of course in cases which have lasted some time, and general peritonitis has set in, then the entire abdomen will feel

rigid. This rigidity is a result of the hyperesthesia caused by the pain and avoids any unnecessary motion or disturbance of the parts within. In other words, it is nature's way of securing rest for the inflamed part.

The temperature usually runs up suddenly to 102° or 104° F., or even higher. In acute, severe cases there is always elevated temperature. Especially in the suppurative form is there high temperature. In the catarrhal form the temperature may not be over 100° or 101° F., or there may be no temperature at all. In the gangrenous form, also, there is generally no temperature. The temperature remains high in the acute form until perforation takes place, then it drops. In suppurative appendicitis the temperature is generally irregular, that is, it varies during the day, and also from day to day. The pulse is rapid and wiry, and varies in different individuals, being extremely rapid in nervous patients. It is regular, however.

There is no marked leukocytosis except in the perforative or suppurative form, and when there is a sudden marked increase of the white cells, it is an indication that perforation has occurred or that pus has been thrown out into the abdominal cavity. It is important in deciding whether to operate or not, in cases that have lasted several days, to watch this sign, for if there is a sudden marked increase in the number of leukocytes, it is advisable to operate at once whether there are other indications for operation or not.

The Characteristic Facies

The countenance usually is pale, but in the presence of a high fever may be flushed, while in severe pain there is a pinched and anxious expression. In gangrenous appendicitis the countenance has a peculiar dusky, copper-colored hue, and this is often the only sign which tells the surgeon, even in the absence of all other symptoms, to operate at once. The tongue is coated with a white or dirty fur. I mention these points merely to emphasize the importance of the various symptoms.

On physical examination, there are no special diagnostic signs, if there are no adhesions, but if an abscess is formed and adhesions occur to wall off the abscess, then a

tumor may be felt in the right iliac fossa, which has a doughy feeling or perhaps harder, and on percussion there will be a perceptible dulness over the area of this tumor, or there may be dulness without the tumor being felt. There will be no dulness without adhesions to wall off the abscess, at any rate the dulness will not be isolated in the region of the appendix. Auscultation often will give us a gurgling sound, which, however, is of little or no importance.

Pathology of Appendicitis

In order to understand the pathology of this disease, it is necessary to have a clear idea of its histology, which I take for granted all understand.

The mucous lining becomes red and swollen. The glands cease to secrete, and there is a desquamation of epithelial cells. This inflammation may extend to the other walls of the appendix, suppuration and ulceration may take place and may perforate through the walls into the peritoneal cavity, and thus general peritonitis may result. The reason why perforation so often occurs is that the appendix is deficient in yellow elastic fibers, and therefore cannot undergo a severe swelling from congestion without rupturing.

In an ordinary appendicular colic the foreign body simply enters and the appendix forces it back into the cecum, and thus relief is afforded. As there are always bacteria in the intestinal tract and as the appendix is a useless organ with a poor blood supply, we can readily see that its power of resolution is very much limited. The bacteria most usually found are the pus microbes, the bacillus coli communis, and, in tuberculosis, the tubercle bacillus.

In the suppurative form the abscess may open out into the cecum, and the pus being thrown out with the feces, it may open out into the peritoneum, causing a general peritonitis. From this, adhesion may form, in the female, with the fallopian tube and the pus be expelled through that channel; or adhesions may form around the appendix, walling it off and forming an isolated abscess followed by absorption. Sometimes the appendix becomes calcified, breaks off into the cecum and is expelled with the feces,

thus giving a natural appendectomy and a permanent cure. In tuberculous appendicitis caseation may occur.

Complications may occur by extension, by rupture, or by absorption, and are as follows: Typhlitis, peritonitis, gangrene, salpingitis, oophoritis, cholecystitis, and a few others.

Among the favorable sequelæ are complete resolution, isolated abscess, and cicatrization. Among the unfavorable ones are gangrene, perforation, peritonitis, septicemia, recurrence, pyemia and hernia.

Diagnosis

This disease is often the most difficult of all diseases to diagnose positively. However, if we bear in mind the picture I have drawn, especially the pain, tenderness, rigidity, headache, nausea and vomiting, we ought to make a diagnosis in the majority

of cases, especially when the appendix has a normal location. The diagnosis should be made in the first twenty-four hours if we wish to do our patient the most good.

If an adult comes to us, or rather if we are called to him, giving a history of constipation for several days and a sudden pain of a severe character in the right iliac fossa, with tenderness at McBurney's point, and even with no other symptoms, we should at once at least strongly suspect appendicitis. The diseases from which appendicitis is to be differentiated are as follows:

Typhoid fever, movable kidney, salpingitis, oophoritis, gallstones, stone in the ureter, rheumatism, intestinal obstruction, extrauterine pregnancy, tubercular peritonitis, carcinoma, sarcoma of cecum or ileum, typhlitis, paratyphlitis, hernia, and hysteria, and in children the onset of scarlet fever.

(To be Continued.)

Mistakes

I. The "Run-Down" Man or Women

By CURRAN POPE, M. D., Louisville, Kentucky

**Formerly Professor of Physiotherapy, University of Louisville;
Medical Superintendent, The Pope Sanitarium**

EDITORIAL NOTE.—This paper will be followed by others on the same general topic, all exceedingly practical and helpful, and written in the entertaining style of which Dr. Pope is a master. These papers will help us to avoid some common errors.

THE "average" man or woman has an innate feeling that he or she possesses sufficient medical knowledge to understand the "simple" ailments that afflict themselves and their acquaintances. They abound in "curbstone" diagnoses, and with equal readiness prescribe, feeling none of that hesitation that a more thorough knowledge of pathology would unquestionably bring forth.

They are the lightning diagnosticators and prognosticators and therapists, medicating themselves and friends (?) on the old boyhood basis of "sight unseen."

I confess I would much rather take my chances on "swapping" horses in the middle of the stream than to follow such suggestions. These purely *assumptive* diagnoses are

sometimes fraught with sad results, allowing the golden opportunity to pass when intelligent medicine and surgery *might* have saved the day. Sometimes we can undo and at the same time preach a propaganda of education. That will help others to see the light.

Few of the laity realize the real research necessary and the difficulties that attend upon a careful and successful diagnosis of an average case. They cannot be made to appreciate the need of knowing what he "has not," as well as the actual disorder or disease present. If, then, it becomes necessary for the *trained* diagnostician to call to his aid special apparatus and the research laboratory when the possibilities for error are so great, what chance has the layman of hitting

the target in the dark? About the same proportionate chance as the finding of the needle in the proverbial haystack.

Slip-Shod Medical Methods

The failure of the laity to utilize medical knowledge and experience is, I am afraid, in many instances, fostered by a similar method on the part of the medical man himself. The listening to a few symptoms detailed by the patient, the asking of a few questions, usually concerning the cloaca maxima, the feeling of the pulse, the glance at the tongue, and the inevitable prescription, based on little or no *real medical* knowledge of the patient, has a tendency to undermine that faith and confidence that should ever be the heritage and portion of the medical man.

Every medical man makes errors, indeed grave and serious errors, and grievously do they suffer; for doctors are human, yes, doubly human, and often so tired that they lack the keen perception needed. But they make no more mistakes than investors or train dispatchers. If doctors, then, make these mistakes, there is very little chance of the layman escaping from error in his efforts to diagnose his own case. If the diagnosis be so hasty and prone to error, what about therapeutics based on the diagnosis? I am afraid the layman is in the position of the doctor who treated his own case and had a fool for a patient. Of all the delusions that possess the nonmedical world, none is so marked as the delusion that masquerades under the title of "run down."

The Patient Who is "Rundown"

When is a man or woman generally considered to be "run down"? In a restricted sense, it is taken to mean one who really has nothing *much* (?) the matter with him, whose machinery is intact, whose mainspring needs "just a little" winding, whose joints need a little oiling; in fact, any one of a dozen ideas, the central core or belief of which is that their general "tone" has been a little lowered.

This being the case, they need a "tonic." Ah! the delusion of that tonic. It is to put renewed vigor into the individual regardless of his *status quo*, regardless of his organic condition. Under such circumstances most

persons have recourse to calomel and quinine, under the belief that they are "*run down*" because of malaria. This, I believe to be especially true of those who live in the South. What is far worse than the nonmedical use of quinine and calomel, is the use of whisky as a "bracer"—a small "tonic" dose. This can be kept up until the minds of certain individuals comprehend a "tonic" (?) dose at from one to two ounces several times a day.

Of the taking of quack, patent and proprietary remedies, much has been said and written, doubtless all true. This promiscuous habit has wrought havoc for years. It cannot be too heartily condemned. Self-prescribing over the drug-counter is ruining the real pharmacist. Let me here say that I cannot too heartily condemn the habit of handing around a physician's prescription from friend to friend, regardless of its contents, the indications or the dangers. It "helped" me; *ergo*, it will help you. Will it? To my mind there is a doubt.

Let Us Learn to Know Our Patients

In order to prevent this state of affairs, we must, as medical men, learn really to know our patients. A clear anamnesis, a careful and thorough physical examination, the analysis or examination of the bodily secretions should constitute the *routine* of cases and not the exception. When this is done, many of the "curiosities" would disappear. Remember, we can never know too much about our patients.

Having made a *real* diagnosis, knowing the functional state of our patient, we can readily outline the hygiene, diet, and treatment necessary. The "run down" condition will relegate itself into some well-defined entity and will soon yield to direct and specific therapy. Such work is at all times a satisfaction, a pleasure, and will prove constantly educative.

The points I wish to emphasize are these:

1. "Run-down" conditions medically do not exist; we want clear and specific diagnoses.
2. Laymen are incompetent as diagnosticians, and worse as therapeuticians.
3. That they frequently injure themselves and their acquaintances by preventing

prompt and proper medication, through prescribing patents, old prescriptions and proprietaries.

4. That diagnoses based on a clear anamnesis, a physical examination, and analyses of the secretions are more likely to be accurate and correct.

5. That therapeutics based on such a correct or scientific diagnosis yields, in these cases referred to as "run down," prompt and satisfactory results.

6. That a clear conception of the conditions by the medical man never injures the patient's case.

7. That physicians must learn to write their own prescriptions, in technical terms, and place upon each prescription a Latin sentence forbidding a copy or its refilling.

8. That the best method to break up "counter-" and self-prescribing is the knowledge that prompt and sure relief can be obtained from the medical man.

Technic of Intravenous Infusion of Nuclein

Supplementing an Article on Treating Tuberculosis by This Method which Appeared in the June Number

By **EDGAR P. WARD, M. D., St. Louis, Missouri**
Professor of Embryology and Clinical Medicine, Hippocratic College of Medicine

HAVING received so many requests for more details in giving nuclein by intravenous infusion, since my contribution thereon to THE AMERICAN JOURNAL OF CLINICAL MEDICINE, and being unable to reply to them all individually, yet realizing how necessary it is that the technic be thoroughly understood and practised correctly in order to obtain the favorable results that I have had, I offer the following specific instructions.

Intravenous infusion with an ordinary infusion-needle (number 18 or 20) must be accomplished with the least possible pain in order to secure the patient's consent for the large number of infusions that it is necessary to give. Hurt the patient, and he will refuse further treatment of that character, even if he does not leave you altogether. With care and close attention to details, as given herein, you will have no trouble whatever in retaining the patient. Also, after he has received several infusions, you will be agreeably surprised at the readiness with which he will submit to the procedure and his longing for the time for the next infusion. So, also, when you fail to penetrate the vein, as sometimes happens, especially at first, these patients will be greatly disappointed and many times will submit to much personal discomfort while you are continuing your

efforts in this direction. I may add that when you have once succeeded in getting into the vein, every attempt thereafter is much easier; the vein "welds up" much better or is gradually educated up to the work to be accomplished.

Overcoming Difficulties in Puncturing a Vein

Fortunately for this method of treatment, the veins are nearly always found to be quite prominent in the arms. Occasionally, though, we will find a patient with exceedingly small veins. Then, indeed, we may anticipate some difficulty in getting the needle to puncture it, for such a vein will slip away from the needle point, while if you make too quick a puncture, there is danger of going clear through it, or of only puncturing the wall and not getting into the lumen of the vessel at all.

An infallible sign that your needle is in the lumen of the vein is, that there is no swelling of the tissues. If the needle has failed to enter the lumen of the vein, immediately upon the flow of the fluid being established, a puffiness will appear and the skin bulge out. If that is the case, then reapply the elastic ligature, withdraw the needle slightly, and endeavor to impale the vein upon the point of the needle. If much of the fluid has gotten into the subcutaneous tissue, it is practically

impossible to insert the needle in the veins of that arm, unless you withdraw it entirely and make a new puncture at some distance from the original point, or better still, take the other arm and faithfully carry out the details there.

Importance of Surgical Cleanliness

In executing intravenous infusion, too much attention cannot be bestowed upon surgical cleanliness, for it must always be borne in mind that you are entering directly into the great circulatory system of the body, and that whatever you introduce is going to be carried to the remotest parts of the body, to tissues that are subject to quick reaction to any foreign substance, and if that substance be a deleterious one, that the reaction will be profound and may jeopard the life of the patient.

Thoroughly scrub with a good antiseptic soap an area of the skin of at least six inches from the point where the needle is to be inserted; then wash off with alcohol and apply an alcohol pad where puncture is to be made.

In order to carry out successfully this operation, the operator should be fully equipped, and these appliances should be used for no other purpose whatever.

Preparing the Nuclein Solution

An infusion-bottle holding one-half pint, or a glass percolator of the same capacity, to which is attached about six feet of one-quarter inch pure-gum tubing provided with a shut-off valve, should be thoroughly sterilized by boiling for twenty minutes. The infusion-needle may be sterilized by boiling at the same time.

Prepare a normal salt solution (using the formula I have previously recommended) of sufficient quantity for the individual patient. In making this normal saline solution, be careful to use pure distilled water, sterilizing the same in a water-bath for twenty minutes. This will raise the temperature to 120° to 130° F. Then add the required amount of solution of sodium triticonucleinate, and mix thoroughly by agitation. We are now ready to place our nuclein solution in the containing apparatus. Attach the infusion-needle to the distal end of the rubber tubing, and

carefully see to it that all of the air has an opportunity to escape from the tube before you insert the needle.

Making the Arm Ready

Now apply an elastic ligature about six inches above the elbow. For this ligature I use an ordinary rubber band cut so as to give



Fig. 1. Applying the elastic ligature

one strip six inches long and one-half inch wide. Place in the patient's hand a hard rubber ball about two inches in diameter, directing him to grasp it firmly. Now tighten the band. It takes some practice to learn just how taut to draw this. It must not bind so as to interfere with the arterial circulation, for if it does, you will fail to get the desirable prominence of the vein.

With the elastic ligature adjusted, and having the patient squeeze firmly upon the rubber ball, the veins will become very prominent and tense; valves in the smaller vein are readily discernible and the median basilic and median cephalic will become quite prominent. Leave the ligature on for a minute or more. If the veins do not become prominent enough, have the patient hang the arm down toward the floor. The firm pressure serves a twofold purpose: it places the muscles in contraction, making them hard and firm; it also draws the skin tautly over the muscles and enables one to see the veins, and this is particularly the case when the veins lie deep, as they sometimes do.

I always use veins upon the flexor parts. I know of no reason why veins upon the

extensor surfaces should not be used, except that my patients always complain of a great deal of pain, both at puncturing and while the fluid is flowing.

Modus Operandi of Injecting

Having everything prepared, I now spray the point of puncture with ethyl chloride. Then grasping the skin between thumb and index-finger of my left hand, I gently push



Fig. 2. Insertion of the infusion-needle

the infusion-needle through the skin and into the subcutaneous tissue. Press the skin flat over the vein selected and gently feel with the point of your needle for the vessel.

Always enter the vein from the lateral or inferior surface.

Having fixed the point of your needle upon the wall, by gentle and steady pressure force it through the wall of the vein. When you have fixed the point upon the wall of the vein, your needle should be held at an obtuse angle to the vein. The pressure upon the needle must be so under your control that it may be instantly relaxed as soon as you feel absence of resistance after having penetrated the wall. If it is not under control, you will very likely puncture the opposite wall; in which event it will be impossible to use that vein, on account of leakage from the second puncture, even if the opening of the needle is successfully drawn back into the vein. If the needle has passed clear through the vein, it is much better to withdraw it and insert it higher up in the same vein or to attack another one instead.

The needle having been successfully inserted into the vein, remove the elastic

ligature, telling the patient at the same time to relax his hold upon the rubber ball, and open the shut-off on the rubber tube. This can all be done in less time than it takes to state it, so that all is practically accomplished simultaneously.

The infusion container should be elevated to about the level of or a little higher than the patient's head. The flow of the fluid should be gradual and continuous; at least twenty minutes being consumed in introducing five ounces. When the fluid is nearly exhausted, shut off the flow with stopcock, gently withdraw the needle and seal up the puncture with a short strip of Z. O. adhesive plaster.

If care is used, a large number of injections may thus be made in the same vein, although I usually alternate, using one arm one time and the other the next. I have given as many as sixty infusions in one vein



Fig. 3. Infusion-needle in ligature removed

within a radius of one inch, and the vein is as good today as it ever was.

A word of warning right here may not be amiss. It is a fact that almost without exception the patient will, after the first few infusions, develop a violent chill in about half an hour. However, though they may shake and take on a ghastly appearance, it need not cause any alarm. It will pass off in about twenty minutes and the patient will feel none the worse for it. When once a tolerance is established for the infusion, the patient will be able to take them every third or fourth day without any inconvenience at all. In fact, they are usually able to take the same at my office and immediately proceed to their usual vocation.

In conclusion, let me say that care in procedure, persistency in the use of the nuclein solution, accurate blood records, and hy-

gienic surroundings will bring results, in victims of tuberculosis, that are astounding to the operator and patient alike.

The Nez Percés Indians

By CHARLES STUART MOODY, M. D., Sandpoint, Idaho

EDITORIAL NOTE.—This is the fifth installment in Dr. Moody's serial about the Nez Percés Indians. It grows in interest. While it is not strictly "medical", it is filled with matter of intense interest to physicians as well as to physicians' wives. The series will be continued for several months. You will want to read every number.

V.

War Breaks Loose

BY a seeming agreement to all the demands of the government the Indians secured the release of their "tu-at" and departed for their several homes. No man knows what was in the minds of the savages when they left Lapwai that pleasant May day. Subsequent events lend color to the view that there was some sort of definite understanding among them as to their future movements. General Howard had peremptorily given them thirty days in which to collect their stock and household goods and return to the Kooskia. That this was manifestly unjust will be conceded by all who are familiar with conditions in the West at that time. It were impossible for the Indians in so short time to round up their widely scattered herds of horses and cattle and drive them some sixty miles, besides fording two broad rivers, then at full tide.

Old settlers, students of the Indians, felt some alarm at the manner in which the savages left the council-grounds. The redskins were too full of joy; they went about the camp laughing and singing as though they had no care on earth. The head men were constantly consulting with the military officers and their agent with regard to their future movements. General Howard came in for an especial share of attention. Had he only known it; the Indians were studying him against a time when a knowledge of his character would be of value to them. That the savages obtained his full measure was evidenced by their attitude toward him within the next fifty days.

Within the required thirty days the Wallowa Indians were back on the Reservation, where they were joined by White Bird and his people, together with malcontents from several bands not affected by the removal order—Indians whose homes were not in the disputed territory, but who sympathized with Joseph. They were back, but they were in full war-paint and armed to the teeth.

The little settlements on the Camas Prairie and White Bird Creek were the first to feel the weight of savage wrath. Several persons who had incurred the enmity of the Indians by acts of injustice fell in a few days.

Only one instance need be cited to show the character of people attacked by the Indians. Samuel Benedict was what is known in the West as a "bootlegger," that is, a man who sells liquor without a license. He was more depraved than the average "bootlegger" in that he did not confine his traffic to white people but sold to Indians as well. Now, no more demoniac creature exists on this earth than a drunken Indian; the stuff unchains all the devil in him, and he becomes totally irresponsible.

One night, in the fall previous to the outbreak of hostilities, Benedict had furnished a band of Indians with liquor until they were half drunk and wholly crazed. It was raining, and after the "bootlegger" had gotten all their money, he turned them out of doors. They hung around for a time, until one of them attempted to regain admission to the house. Benedict seized his rifle and shot the Indian dead. When war broke out it was but natural that Benedict should be one of the first to feel the weight of savage

vengeance. This circumstance may be taken as a fair type of all the crimes committed up to the time the troops took the field.

Chief Joseph counseled against the war. He wished to be allowed to go where and when he chose, he did not recognize the right of the government to place him on any allotted parcel of ground and require him to remain there. He would not fight unless coerced. If, however, the soldiers attempted to interfere with his movements, he would defend his liberties with his life. There are many who sympathize with him in his resolution.

The First Military Attack

After crossing Salmon River, Joseph first encamped on Rocky Canyon Creek, where he was visited by several white people, to whom he spoke freely of his intentions; but afterward he moved his camp to the mouth of the White Bird Creek as being a better location. Here he was attacked by Colonel Perry on June 17, with a force of 90 men. The Indians secreted themselves behind protecting rocks and dealt such destruction into Perry's force that less than half of them staggered back into Mount Idaho to tell the tale. It was a crushing defeat for the soldiers and proved beyond doubt that the Indians would fight.

General Howard now took the field with a force of over 300 and attempted to corral Joseph and drive him on to the Reservation. The wily chief proved difficult to "round up." No sooner did he learn of the approach of Howard, than he retired beyond the Salmon and watched the antics of the whites trying to transport an army across that raging torrent. Some "friendly" Indians showed the soldiers how to cross, and Joseph pulled up and marched down the south side of the river, crossed back at Craig's Ferry (Ford) onto the Camas Prairie again, attacked Perry and Whipple, who had been left with a considerable force to protect the wagon trains, defeated them, and made his way to the Forks of the Kooskia, where he went into camp.

Here he was discovered after several days by Colonel McConville and Major Fenn, in command of two companies of civilians who had become disgusted with the dilatory

methods of Howard and pulled out for themselves. McConville sent word back to Howard of the location of the Indians and urged that general to hasten forward as rapidly as possible. Howard moved by way of Jackson's bridge, a circuitous route, and approached the Indian position from the south side, reaching there on July 11. A pitched battle ensued, in which the Indians proved themselves more than a match for the soldiers, inflicting severe punishment on Howard's troops and finally making their escape across the Kooskia into the dense timbered region surrounding the foot hills of Bitter Roots.

Here they went into camp on nearly the same ground where Lewis and Clark first discovered the Nez Percés. The main band of Indians was joined at this place by Looking Glass and his people, who had been driven from their peaceful homes by the soldiers. The savages held a council and decided to resist until the last Indian was dead.

The Campaign of the Bitter Roots

Then began the long march across the Bitter Roots with Howard and his army in the rear. The retreat from the time the Indians left Weippe until they finally surrendered to Miles in the Bear Paw Mountains in Montana covered over 900 miles and has been likened to the retreat of the Ten Thousand Greeks. Competent experts consider it one of the most masterly military movements in all history.

Chief Joseph, encumbered with a horde of helpless women and children, burdened with all his camp equipment and horses, outdistanced the trained, well-mounted, well-fed troops of the government, turned no less than five times and beat off his pursuers, giving his noncombatants time to place safety between themselves and the enemy.

When the Indians reached the summit of the Bitter Roots, they found the Lo Lo Pass fortified and defended by Captain Rawn with a company of regulars and two companies of Montana volunteers.

Joseph did not wish to fight. He only desired to make his way into the buffalo country to the southeast where he might live undisturbed. To avoid an engagement

the chief sent Looking Glass and Ollicut to confer with Rawn about allowing the Indians to cross through the pass and go on their way. The officer refused to treat with the savages, but upon the promise of the Indians not to molest either life or property in their flight through the Bitter Root Valley, the citizen volunteers insisted that the band be permitted free passage. It was as well that they were allowed to go unmolested, for had a battle been fought there is no doubt but that the little army of soldiers would have been annihilated.

To the everlasting credit of the Indians be it said that in all their long march through the thickly settled Bitter Root Valley they never touched one thing nor injured a single person.

The Indians passed up the Bitter Root Valley, over the crest of the Rocky Mountains, down to the Big Hole and went into camp. They had not heard from Howard for several days and began to think the war was over. They supposed that when Howard reached Rawn's position on the Lo Lo Pass that officer had told him of the agreement and that Howard had turned back. They had yet to learn that the government was not content with stealing their homes but was determined to secure their liberties as well.

The Government's Perfidy

Colonel Gibbon, while Joseph was crossing the mountains, was moving with all speed from his post at Fort Shaw, by way of Cadotte's Pass and Missoula, to overtake the Indians. Reaching Missoula, he picked up several companies of volunteers, many of whom had been with Rawn and consequently knew the route the Indians had taken. Striking the Indian trail near the summit, the colonel stripped his men to the lightest possible marching order and hurried forward. He discovered the Indians in camp, totally unsuspecting of any danger.

The Surprise at Big Hole Camp

It was night and the troops were disposed in the darkness so as to invest the Indian position. In the chill darkness the soldiers lay on their arms awaiting the dawn. Gradually the gray light crept into the eastern sky, the fog rose on the still water, the tall

pinus on the hillsides stood out in ghostly relief, the white tepees gleamed through the coming light. An Indian rode out of the camp toward the horse herd-grazing in the valley below. He approached a clump of willows that bordered a slough and something in there caught his eye. He paused and peered into the dusk. Throwing his rifle into position he fired, at the same time uttering the war cry. His shot was answered by a volley. The savage tumbled out of his saddle, dead.

The volley was a signal for the charge. The crouching soldiers sprang from their concealment and rushed headlong into the camp, firing as they ran. The Indians, suddenly roused from their slumbers, came tumbling out of the tepees, to be shot down like dogs. It was a frightful scene. Men, women, children ran about in utmost confusion, to be met by a withering carbine fire wherever they went. In less than five minutes the camp was in possession of the soldiers. They seized brands from the smoldering camp fires and began throwing them into the tepees.

The surprise was as complete as unforeseen. The victorious soldiers ran about trampling under foot the dead and the dying Indians, demolishing the tepees and camp outfittings.

But they made the fatal mistake of thinking the Indians were defeated. They little knew the temper of the men with whom they had to deal. Suddenly on the hillside above the camp came a war cry, shrill as the scream of an eagle. It was Looking Glass calling to his braves. Off in another direction came the rally call of White Bird; in another, Joseph's voice could be heard.

Then came from every point a rifle fire so deadly true that with every report a soldier threw up his arms and fell. Inch by inch the maddened savages crept up, pouring down upon the devoted army exposed there in the open such a fire as no human bravery could withstand. The little river valley was becoming a charnel house. Dead and wounded soldiers lay heaped about the bodies of the Indians they had slain only a few minutes before.

"Retreat," "Retreat," "Retreat," rang the bugles, and the troops fell back into the

protection of the woods. Mox Mox and his men, who had run for the horses at the first fire, now returned and, with the women, packed up the camp and trotted off down the valley while the warriors held the soldiers at bay.

All day long Joseph kept Gibbon penned up there in the woods, nor allowed him to move. The soldiers lay behind logs or any protection they could find, and if one showed himself he became the target for a dozen unerring Indian marksmen. All day the beleaguered soldiers lay there under the burning sun, tortured with thirst, watching the river sparkling and dancing maddeningly near, but to attempt to reach it was to court death.

The victorious Indians fired the dry grass in the afternoon and as the flames swept up toward where the soldiers lay, crept behind watching for the appearance of a bluecoat. Brave old Gibbon, though wounded, rallied his men and prepared to make a dash for liberty though it were but a forlorn hope, when by an almost seeming intervention of Providence the wind veered and drove the fire back.

Night mercifully fell and put a stop to the carnage. The Indians still invested the position until their people could place many miles behind them. At midnight they got together, fired one last volley into the woods where the troopers lay, gave the war cry, then rode off.

The Indian's Quest for a Haven of Refuge

For many days the weary little band of Indian fugitives wandered about in the forbidding desert wastes of Montana and eastern Idaho trying to find a place where they might rest. They turned once as though about to enter Jackson's Hole in Wyoming, where they could separate into small bands and defy capture. Evidently thinking better of it, they turned east and camped on the shore of Henry's Lake.

On the same night Howard, who had assumed command of Gibbon's remnant after the battle of the Big Hole, camped on the Camas Meadows eighteen miles distant. The troops felt secure, so secure that they laid aside their clothing and sank into a deep sleep. Night wore on and the coyotes

howled about the camp. The half-asleep sentinel paced his beat, unheeding the insistent yelping of the little prairie-wolves.

The Troops Outwitted by the Indians

Bacon's company of infantry was expected to join the command sometime during the night, and about at 3 o'clock in the morning, the sentry saw them coming down the road marching in regular order—it was Bacon, for Indians never march in military units. Nearer and nearer came the dark mass with the regular swing and marching precision of trained troops. The sentry peered into the gloom, undecided. Surely, no soldier would approach so near to a military camp without halting.

The picket became suspicious. The body of men was now very near. "Halt," called out the guard. Still the body moved on. "Halt, or I fire," once more came the challenge. Still the dark mass came on. Then came a spurt of fire that lit up, not the white faces and blue uniforms of Bacon's command, but the dark, eager faces and Indian dress of Joseph's band of warriors. The rifle fire was answered by a volley from the Indians' rifles, and the stillness of the night was broken by the shrill wavering war whoop of the savages.

All was confusion and consternation in the camp. The men tumbled out of their beds half dressed and groped in the darkness for their arms; horses plunged and reared; wagons were overturned, tents thrown down; the cavalry horses in the meadow below camp were stampeded by Indians who sprang up among them at the first fire and waved blankets. The crouching dark forms poured into the huddled soldiers a galling fire.

But order soon came out of the chaos, the troops formed and returned the fire. The Indians sank back into the darkness from whence they came, taking with them more than 500 horses, thereby leaving the command almost without mounts. When morning broke, enough mounts were mustered to equip two companies. Then the soldiers sat out in pursuit of the fleeing Indians, whom they could see several miles away, among the sand hills, making off with the cavalry horses.

However, with characteristic lack of judgment, the soldiers rode into a trap set for

them by the astute chief. Leaving a portion of his band to keep the captured horses on the move, Chief Joseph took the remainder and stationed them behind rocks on either side of a steep canyon up which the troops were riding. When the soldiers were well within the jaws of the trap, the Indians rose from their concealment and delivered a plunging fire that threw the troopers into confusion. There was nothing to do but retreat, and this they did, followed closely by the savages. When but a short distance from the military camp they ran into Otis with his howitzer battery. An Indian cannot face cannon, so the savages retreated, but were not followed.

Joseph proved in this fight that he could assume the offensive with as great skill as the defensive. The soldiers lost over 300 horses.

The Indians broke camp and entered the Yellowstone Park region. They wandered about for several days, turned north, crossed the Yellowstone and entered the rocky region surrounding Canyon Creek. Here they were attacked by Colonel Sturgis and defeated. This may be said to be the first actual defeat suffered by the Nez Percés from the beginning of the war.

After the battle of Canyon Creek the Indians slipped away in the night and struck for the boundary line, where they hoped to join Sitting Bull, who had sought sanctuary under the British flag a year previous. The Indians despaired of obtaining freedom under the flag so often dedicated to freedom and with such wealth of oratory and such richness of promise.

Northward the weary little band of refugees sped, strewing the trail with dead and dying worn-out horses and discarded camp equipment. Their sole thought was to reach a place where the persistent bluecoats dared not follow. North of the Missouri River lay a semicircular range of hills, the Bear Paw Mountains. Joseph thought if he could reach these hills he would be safe. Their horses were all but famished and the people themselves had almost forgotten the taste of food. With grim determination they toiled on, outdistancing the troops who were following them. Finally they reached the protection of the wooded hills and went into camp. They could go no further—nature refused to carry their exhausted bodies one step nearer the goal.

General Miles Appears

That veteran Indian-fighter, General Miles, was on their track with fresh troops. He struck the trail just where it entered the Bear Paw and without delay attacked the camp. The Indians flew to arms and fought with the ferocity of despair. They made sad havoc among the soldiers, but it was a forlorn hope. Their ammunition was exhausted, their numbers were so thinned that they could not put up the old-time resistance. Joseph realized the futility of longer holding out and came to Miles with an offer to surrender. Miles, always magnanimous, offered, if the Indians would lay down their arms, to return them to their reservation; and had his pleadings been listened to by those in authority, his promise would have been fulfilled.

THE finest thing a hog can think about is a good soft mud-puddle where he can lie in perfect comfort, and undisturbed, when his belly is full, and a trough full of swill with which to fill said belly. With these he is perfectly happy, and all his ambitions are satisfied. If all you want is just to be "happy" go and make a hog of yourself. Get into the slime, fill your slippery hide with the swill of selfishness and live just for yourself and yourself alone.

Uncle 'Zekiel's Nu'ss*

By G. FRANK LYDSTON, M. D.

I aint one of the complainin', sickly kind,
Feller's thet's allus gruntin' an' full o' pain,
Chock full o' misery an' depressed an' blue in mind
To me's like weather thet aint nothin' only rain,
They don't git nowhar nor nothin' done,
But loses out on everythin' from work, ter fun,

Of course I've had a crick or so in my ole back,
An' Doc Smith has pulled a tooth or two;
An' once I hopped barefooted on a rusty tack,
An' fer a time the Doc was wond'rin' whut ter do,
But things like that, with now an' then a hackin'
cough,
Or a spell o' janders in the airly fall
(Fer which Doc gave me calomel an' throwed it off),
As I look back'ard at my life, is all
Thet I kin think of in the way of ills
Thet ever needed any o' Doc's jizen or his pills.

Well, when I'd got past sixty I felt middlin' sound
From most things thet takes a feller from this
sphere
An' puts him out o' biz an' underground,
An' I told Betsy (thet's my wife) she needn't
fear—
She'd never wear them furbelows an' frills
What widders wears to antidote their grief an'
woe
To cheer 'em up from thinkin' of their earthly ills
While waitin' fer the chance ter make another
throw.
But I'd begun ter brag too soon, I swow—
Ther was trubble 'nough a comin' ter kill a cat—
An' I quit braggin', an' haime done any up ter now;
Ner never will no more, ye kin bet yer life on that.

Ye remember how the weather played us tricks
last Spring?
Fust it was cold an' raw an' allus drizzlin'
An' the next day hot enough ter bake most any-
thing,
Jes' fairly set the marrer of yer bones ter sizzlin'?
Well, in one o' them hot spells, like a fool,
Thinkin' spring was sot an' stiddy an' come ter
stay,
I vowed I'd quit my job or keep ole 'Zekiel cool,
An' so I shucked my comforter an' flannels
straight away.
But I come down with lung neumony so gosh-
dinged quick
I hed hardly time ter figger out that I was really
sick.

Betsy 'lowed I'd weakenin' of the head,
Didn't know enough to come in when it rained.
What on earth would she do ef I was dead?
'd a talked back, but my lung, gosh hemlock!
how it pained!
Well, Ma sent for ole Doc Smith, an' he hitched up
an' come a kitin'—
An' y'oughter heerd th' ole cuss swear an' tear
around.
Ef I'd been well you bet thet him an' me'd a been
a fightin',

Fer he was shorely takin' on an' tall in' out o'
bounds
About "durn ole fools who'd ought ter hev
gardeens,"
An' wasn't "half as smart as most any hill o'
beans."

But, all the same, Doc had somethin' serious in his
queer old eyes,
An' when he pounded on my chest an' listened
at my back
He kinder looked as though he'd had a great sur-
prise,
An' his face grew stern an' set an' black.

"Hell! Betsy," sed ol' Doc, still keepin' up li-
thumpin',

We've got some work cut out as sure as you're
alive.

Here's a case whar we've got ter get things humpi-
'Ef ver want yer pore ole 'Zekiel to survive;
An' the fust thing is ter heat a poultice pipin' hot
An' slap it on right over this neumony spot.

"Then we've got ter hev some help to take keet of
this yere case,

Ter ease his lungs an' keep his cough an' fever
down.

Ter nu'ss him back ter life an' health an' help him
win the race.

"Fer 'Zekiel wouldn't look so well as some a
wearin' of a crown.

He hain't got the voice ter sing them songs the
angels sings.

An' he wouldn't trade them crooked legs fer any
sort o' wings;

An' so we'd better be a tendin' him right sharp
Or he'll be sittin' on a cloud a playin' of a harp."

"All right," sez Ma, her tears a streamin' down,
"I'll send fer my dear ole sister, Marthy Jane—

"Twon't take her long ter make the trip from
town—

She's a born nu'ss, an' she'll soon make 'Zekiel
well again."

Now, I don't remember 'zac'ly all wot passed—
jes' th' expression on Doc's face,

An' how he sort o' spunked right up an' said:

"At sickbeds, nowadays, a feller's wife's relation
hez no place.

Most sick folks wot they've nu'ssed is gathered
to the dead.

I'm not disrespectin' of yer sister, Marthy Jane,
But I've run agin' that sort o' nu'ssin' wonst or
twic' before.

Jest a thinkin' of it ever since hez give me a pain,
An' I reck'n I won't have them Sairy Gamps no
more.

"Now, up in town there's what they call a trainin'
school.

A place they teach gals nu'ssin' o' the sick,
Give 'em lectors an' make 'em live by rule.

Make 'em neat, an' bright, an' mighty quick;
I'll jest send up for one o' them today.

An' set things goin' here with 'Zekiel right away."

*Written for the commencement exercises of the Lakeside
Training School for Nurses, 1910.

Well, you'd ought ter seen the gal he got!

She wan't more'n 'bout twenty, that's a bet,
A reg'l'ar little Johnny-on-the-spot.

An' Betsy's face! Well, I'll bet Doc Smith's
a laughin' yet.

Sez she: "See here, Doc, d'ye spose I'll stand fer
anythin' like that?"

Why, she aint no bigger 'n my ole speckled hen,
An' I'll vow thet she don't know as much as my
ole cat.

She can't fool me the way she kin you men,
I swow she powders an' she paints—them cheeks
aint nat'ral red—

An' I don't like them rats she's wearin' on her head."

But Doc jest sot his teeth, an' lookin' sort o' grim,
Reckened he'd run his biz 'thout lettin' nobody
interfere.

Said them argyments didn't cut no ice with him,
"Besides, fer all yer argifyin', the gal's already
here,

An' here she's goin' ter stay an' stick
'Slong as yer pore ole husband 'Zekiel's sick."

Then who should put in his oar but my son Bob,
Thet was jest come home fer holidays from
school.

"You're all right, Doc, I'm glad yer on th' job,
Jest 'cause a gal is young an' purty don't prove
thet she's a fool.

My vote's fer her, an' I'll stuff th' ballot box at
that.

She's up to snuff an' knows every nu'ssin' stunt,
I'll bet a hat."

Doc looked at him a minute, sort o' queer,
An' callin' to the gal said, "Come in an' get ter work,
my dear."

Well, I pulled thru the raffle, an' when one day
Doc said,

"The crisis happened late last night,"

I didn't ask him what the crisis was nor what he
did with it.

I was so plum' glad to see the shore in sight,
I didn't care fer any frills or trimmin's, not a bit,
Jest wanted to breathe the air an' see the critters
an' the plow agin,

An' was contented to remain in this dark world o'
sin.

An' when at last they'd got me up an' dressed,
A settin' on the porch an' bathin' in the sun,
I looked at her an' didn't keer a darn ef I never
convalesced,

But wondered jest how long the little gal'd stay—

An' hoped, b gosh, she'd never go away.

Fer I remembered the gentle softness of her hand,
Jest like a feather, it was so soft an' light.

I'd seen them cheeks close too an' was glad that
Bob had sand,

Had heerd her voice thru all them painful days,
an' knew the boy was right.

Ther wa'n't any paint nor any powder there;
An' Betsy shore wuz wrong, them "rats" wuz
nat'ral hair.

Shore, you kin guess the rest o' my little yarn—

I fell in love with her. Quite a common endin',
Well, s'pose I did, I don't care a darn,

T'was nat'ral arter all her gentle tendin'
An' I made up my mind I'd never let her go,
So I jest reared up an' told the fam'ly so.

Betsy? Well, she didn't say much to me, fer I wuz
still amazin' weak,

But I heerd her sort o' cussin', an' discussin'
things with Bob,

An' tellin' wot she thought of a certain ole man's
cheek,

An' her 'pinions of thet little nu'ssin' job.

An' Bob said: "Daddy's right; I think she'd orter
stay.

The house'd seem unnat'ral now if sh'd leave.
I don't guess I'll stand fer it, so I'm goin' ter back
Dad's play,

An', Ma, I really wouldn't like ter see Dad
grieve.

I've hed a talk with her, an' I'm goin' ter have my
say.

So, Ma, jest reconcile yerself, she aint never goin'
'way."

Well, Ben shore backed me up, an' I'm durned glad,
An' now the good wife's shorely reconciled.

We kept the nu'ss, she got a bran' new dad,
An' dear ole Betsy's got a grown-up female
child.

Doc Smith? Oh, when he heerd the news, his
eyebrows kinder curved,

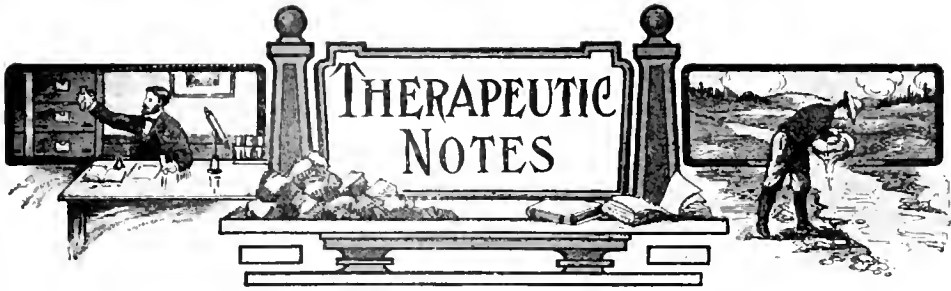
An' fust I'd thought he'd laugh right out,
An' then he says, slow like: "Well, youth it will be
served,

An' I reck'n thet boy knowed jest whut he was
about.

An' the gal, well, she might go further an' fare
much wuss.

As fer you, 'Zeke, lucky dog, you've stole my
fav'rit nu'ss."





SERUM TREATMENT OF LOBAR PNEUMONIA

For the past two years and a half, while not forgetting or neglecting elimination, Dr. James H. Duncan (*Canad. Pract. & Rev.*, Oct., 1910) has been using pneumolytic serum in the treatment of lobar pneumonia, and he reports his results in more than twenty cases. From his experiences he is convinced—

(1) That this method is of real and great service in shortening the period of disease—in stopping it before the critical crisis arrives—and in favoring a brief and uneventful convalescence. (2) That serum probably is of slight value, if any, after the sixth day of the disease. (3) He has only once found it necessary to give more than two injections, that is, twenty cubic centimeters of serum, and that one case was so badly complicated with pleurisy that no satisfactory conclusion could be drawn. When he gave the third injection the pleuritic were by far the predominant symptoms and seemed little affected by that dose.

TREATMENT OF BOWEL TROUBLES OF CHILDREN

In an article published in *The Medical Summary* for July, 1910, Dr. W. J. Brymer discusses the management of the bowel troubles of children, and, as to medicinal treatment, he properly holds that no special plan can be laid down, each case having to be managed according to indications. However, two objects must always be kept in view, namely, thoroughly to clean out the intestinal tract, and then to render and keep it as aseptic as possible with appropriate remedies. Dr. Brymer relies upon calomel,

followed by an alkaline purgative, repeated if necessary; a thorough clean-out, then sulphocarbolates sufficient to maintain asepsis. He has had good results from castor oil with a few drops of oil of turpentine if there is much bloating. If there is much pain, paregoric may also be added. When the stools are large and watery, coto bark in full doses gives good results.

Where there is evidence of much sloughing, the author relies upon a mixture of chalk and bismuth, to which enough opium in some form has been added to control pain and keep the patient quiet. The bismuth and chalk mixture as ordinarily dispensed can not be relied upon, because it is coarse and too full of grit, which often acts as an irritant instead of as sedative. If the ingredients cannot be secured finely ground, the doctor should himself triturate them thoroughly; but this preparation is now offered of excellent condition by several firms. In the form of an impalpable powder and suspended in a convenient vehicle, it is a remedy well worth a trial in almost any form of bowel trouble when indicated. It also makes a convenient vehicle in which to administer other remedies.

Bichloride of mercury in small doses is another remedy well worth a trial when there is much sloughing and the odor bad, but it must be given with care. The sulphate of copper also is a fine astringent in some cases.

RATIONAL TREATMENT OF PNEUMONIA

The employment of vaccines in acute pneumonia is discouraged by most physicians because of the risk of adding to the existing toxemia which constitutes the grave danger of the early days of the disease

According to *Folia Therapeutica* (Oct., 1910, p. 89), the rational management of the disease is to concentrate all effort on combating the cardiac catastrophe which this toxemia may produce. The general treatment directed to this end is familiar enough, but when cardiovascular or respiratory failure is heralded by restlessness and sleeplessness, there need be no hesitation in resorting to judicious hypodermic injections of morphine. Many a case of threatened heart failure has been rescued by the rest and calm brought by these means.

However, it is a pitiful travesty of practical medicine to attempt to treat cardiac failure without determining the physical condition of that organ. Now, it is just in pneumonia that this matter is of supreme importance, because the right side of the heart is apt to become distended, and unless this distention is relieved, all efforts at stimulation are liable to be labor lost. This relief can be obtained rapidly by venesection, more leisurely by the application of leeches. In any case, there can be no rational therapeutics of cardiac failure in pneumonia without lessening the burden which so often harasses the heart into a fatal syncope.

We would add the suggestion that unloading the blood into the general circulation with aconitine or veratrine, properly guarded with strychnine and digitalin, will make venesection unnecessary.

THE HYOSCINE, CACTIN, MORPHINE COMBINATION

The Journal of Therapeutics and Dietetics for April, 1910, contains the following editorial on the hyoscine-morphine-cactin hypodermic tablet for producing anesthesia:

"There can be no question but that this compound has a great future before it, both as an anesthetic and an anodyne. Not that the effect of the compound is much greater in both these directions—and especially the former—than that of all the separate ingredients taken singly, and differs in its nature from these to a considerable extent. But its exact indications and contraindications are probably not yet fully worked out, certainly not fully understood by the majority of those who use it."

"It is an anesthetic of great value, but it is not the anesthetic of choice in all cases, any more than is ether, chloroform, or nitrous-oxide gas. It can never be used with advantage, for example, in short and trivial operations, since it takes about six hours to go through the ordeal of inducing anesthesia and recovering from it, including the operation itself. Again, it has a tendency to produce rigidity of the muscular system, instead of the relaxation of ether anesthesia, and this is an unfavorable condition for many operations. In a large class of cases, however, it seems to be the best anesthetic yet discovered.

"The idea which we wish to enforce, as to all the cases we have mentioned, is the importance of definite indications for every drug. The men who study to develop these indications are the pioneers, who prepare the way for the use of the remedies by the everyday practitioner of medicine with success. And it is alike the privilege and the duty of every physician to add his mite to this important work."

THE DEADLY "CONSUMPTION CURE"

The following item relating to "fake consumption cures" and to "quacks" who are preying upon those afflicted with, or believe they have, consumption, taken by *The General Practitioner* from *The St. Louis Times*, shows so clearly the need for a more thorough education in the matter of prevention of fraud, as well as prevention of disease, that it is reproduced in full:

"According to the National Association for the Study and Prevention of Tuberculosis, more than \$15,000,000 annually is spent in 'fake' consumption cures.

"The association also declares this money is spent by the people who least can afford it, and who are 'taken in' by the alluring advertisements of the so-called 'cure.'

"It is the claim of the association that the victims in these instances receive no benefit whatever, but, on the contrary, have their chances for recovery lessened by the harmful 'treatment.'

"Investigations which have been made, according to the association report, show these 'cures' to be divided into three classes.

"In the first are included devices and drugs which are obtainable at a figure varying from ten cents to five dollars.

"The second class includes the 'institutes,' 'professors,' or 'company of doctors,' who for a consideration will guarantee to cure the most stubborn case of tuberculosis by methods of which they are the 'sole proprietors.'

"In the third class, as set forth by the association, are included home-made remedies. In this class are onions, lemons, rattlesnake poison, coal dust, lime dust, pig's blood, milk 'strippings,' and alcohol.

"It is held by the association that the most efficient treatment for the dread disease yet discovered is the open-air, or oxygen, treatment. In all cases a competent physician should be consulted, the association asserts.

"The association also declares that an investigation of the methods pursued by the fake concerns discloses that each year there is spent a sum totalling \$3,000,000 for advertising these 'treatments.'"

THERAPEUTIC APPLICATIONS OF CALCIUM CHLORIDE

In view of the prominent place that has been given to the calcium salts by therapeutists during the past few years it is of interest to refer to a résumé by Dr. Moncany of the therapeutic applications of calcium chloride in *La Clinique*, and noticed in *The Lancet*. Thus it is found that calcium chloride has been employed more particularly in traumatic hemorrhage, in purpura, hemophilia, hemorrhagia, smallpox, and other hemorrhagic diseases, and in hemoptysis, in which its usefulness is a question of divided opinions. It has been given to increase the tonicity of the heart and vessels, in certain forms of headache, neuralgia, pruritus, eczema, and in urticaria. It has also been recommended in obstinate diarrhea, epilepsy, laryngismus stridulus, convulsions, neurasthenia, hysteria, and mental alienation; its results in these cases are considered to be due either to its calmative or to its recalcifying action. Excellent results have been reported in the treatment of chil-

blains, acute edema, serous effusions, edema following vaccination and viper bites. The eruptions that are liable to follow injections of antidiphtheritic serum may in most instances be averted by the administration of a single dose of calcium chloride on the day of the injection and the two following days. The dose of the calcium salt varies according to the quantity of serum given. The author also refers to the use of calcium chloride in albuminuria, nephritis, pneumonia, tuberculosis, pregnancy, coryza, and also in rickets.

The salt has been given by mouth, subcutaneously, and per rectum. Wright found that the hypodermic method tended to cause sloughing. The intravenous method has been condemned on account of the superintention of thrombosis in experiments performed on dogs. Enemata containing calcium chloride are readily absorbed and are well borne by the patient. It is the usual practice to prescribe the calcium salts in small repeated doses, given by the mouth in dilute solutions. It is generally agreed that the treatment should be interrupted after a few days, as the continuous administration of the calcium salts tends to produce results which are just the opposite of those required. It is recommended to omit the treatment every fourth day, allowing a longer interval every eight or ten days.

Calcium chloride must not be given to persons predisposed to calcic retention or atheroma, on account of which it is generally contraindicated in elderly persons, alcoholics, and persons suffering from lead poisoning. The best results will be obtained by cautiously administering the drug by the mouth, in small divided doses, for brief periods, with intervals of cessation from time to time.

Calcium chloride may be combined with opiates in the treatment of hemorrhage. Its intensely disagreeable taste has long militated against its employment. Perhaps the best flavoring agents for masking the bitter saline taste of calcium chloride are cinnamon and peppermint.

Several formulas are given by the author, the simplest of which contains 150 grains of the salt in 10 fluid ounces of water, previously flavored with syrup of

peppermint. Two tablespoonfuls of the mixture are given for a dose.

THE ADMINISTRATION OF DRUGS WITH REGARD TO ABSORPTION AND ELIMINATION

Dr. Wm. Brady (*New York Medical Journal*, January 29, 1910) contributes an important paper on prescribing. He says:

"A practical knowledge of the rapidity of absorption and elimination of drugs is a requisite of successful therapy. It is of equal importance to know whether a dose is best given before a meal, at the end of a meal, or one or two hours after a meal; and to exercise good judgment in selecting the best form and the most effectual manner in which to prescribe the drug.

"An almost unbelievable disregard of the foregoing by the majority of practitioners has led to a regrettable degree of nihilism and consequent loss of confidence on the part of disappointed patients who drift away to the nondrug healers in search of the more promising cure there offered.

"Textbooks on therapeutics, as a rule, have little to say on the subjects of absorption and elimination, and many of them inconsistently fall into the error of advising doses *ter in die* indiscriminately, whether the drug is absorbed and eliminated in one hour or three days; thus, a combination of glonoin with digitalis may be suggested, the dose to be given thrice daily or every four hours, a plan that is about as effective as it would be to tie together the hour and minute hands of a clock. It is not strange, therefore, that we commonly crowd our doses closely together, in urgent cases, heedless of the fact that not the frequency but rather the amount of the dose should be increased to obtain a more pronounced effect."

THE ABSORPTION OF MILK CASEIN FROM THE SKIN AND SUBCUTANEOUS TISSUE

Dr. Karl Roesler (*Wien. Med. Woch.* 1910, No. 20) has experimented with cutaneous and subcutaneous applications of proteids, which are sometimes not well taken by mouth

although they are readily absorbed by the mucous membrane. He used for his experiments the preparation known as sanatogen. Dr. Roesler prepared one-half Gram of sanatogen with water, and for another experiment with vaseline, both cold, in such a manner that a fairly consistent paste resulted. These were spread upon muslin which had been weighed, then the entire poultice was weighed in order to ascertain any possible resulting loss. Then the watery mixture was placed on the right and the vaseline mixture on the left arm of the experimental person, who was young. The arms had been washed with soap and warm water and shaved and cleaned with alcohol and ether. After six hours both compresses were removed, when it was found that of the watery mixture 46 percent had been lost and of the vaseline mixture 20 percent, this much, therefore, having been absorbed by the skin. On examination of the residue, it was found that of the casein in the watery mixture 18.4 percent and of the vaseline mixture 21.2 percent had been absorbed.

In order to ascertain the absorption through the subcutaneous cellular tissues, the author injected 20 cubic centimeters of a 2-percent solution of sanatogen under the skin of the back. (This solution can easily be sterilized.) It was found that after six or seven hours the injected 20 cubic centimeters had been completely absorbed. Pain or other disagreeable sensations had not been observed. It was also found possible to cause the rapid absorption of like preparations in the media as frequently used in massage, such as vaseline, lanolin, etc. This procedure, in the author's opinion, is especially useful in cases where proteids are to be absorbed at certain areas, as it may be desired in treatment with massage.

The author suggests that it would be also interesting to treat neuralgia with sterilized sanatogen solution, and likewise atrophy due to inactivity or prolonged immobilization, which would be treated either by means of massage or by injections, or by both methods. Finally, the method might be of use cosmetically, and the author says that a 10-percent sanatogen mixture has rendered him good service in his own case when his hands were chapped.



Pharmacodynamics of Digitalis According to Contemporary Authors

THE following pharmacodynamic notes, gleaned and extracted from the most recent foreign works, seem to have some interest to American physicians.

The glucosides of digitalis fix themselves chemically very probably upon the protoplasm of the cardiac muscle, on which the remedy acts specifically in reinforcing and prolonging the systolic contractions, hence the resulting elevation of the blood pressure with a diminution of the number of pulsations. The diastole is also influenced, because digitalis diminishes the elastic resistance which the myocardium opposes to the blood column which presses against it; but as soon as this pressure ceases to act the myocardium rapidly resumes its initial volume. The cardiac muscle becomes, therefore, at once more extensible and perfectly elastic. In a word, under the influence of digitalis both the diastolic extension as well as the systolic contraction become amplified. There results from this an augmentation of the volume of blood which passes the aorta in a given unit of time without the absolute force of the myocardium being augmented on that account. The heart works with a greater degree of force than it has at its disposal ordinarily.

Digitalis mobilizes, therefore, the reserve energies of the myocardium. Its action would consequently be wanting upon a heart which is too much degenerated or enfeebled, as for instance the heart of an obese person. This peculiarity might serve in forming a prognosis, and again so much the more must one, on that account, be sure of the product of digitalis to be employed.

The circulation of the blood is enhanced, in all of its relations, by the influence of digitalis; the heart itself is better nourished and its function is notably improved. This is a very important fact, the more so as Plesch has demonstrated that the myocardium receives proportionally ten times more blood than the rest of the organism.

Gottlieb and Magnus admit that digitalis has a vasoconstrictive action. If this be the case, then this medicament would be a bad cardiosthenic, for it would augment peripheral resistances by diminishing the lumen of the small arteries. (Schmiedeberg).

Indications.—Digitalis ought to be given immediately on the appearance of loss of cardiac compensation, as soon as rest alone does not secure a rapid amelioration. Experience has shown, in fact, that digitalis is a specific in cardiac insufficiency, especially on its first appearance.

This medicament is indicated, also, in all cases of blood stasis, whenever we notice an unequal distribution of the blood, such as takes place in the course of pulmonary emphysema, in arteriosclerosis, in renal cirrhosis, or where pleural adhesions exist. But it is in primary heart weakness, especially, that digitalis gives its most splendid results, that is to say, at the first appearance of decompensation in valvular or myocardic affections. Digitalis is necessary in angina pectoris, in cardiac asthma accompanied by cardiac weakness.

In nervous affections of the heart digitalis is not indicated. Neither is it indicated in the tachycardia so frequently observed in the postpartum period. Its action on the

tonus of the tenth nerve pair is, in fact, far from having been demonstrated.

Contraindications.—In cerebral hemorrhage, in recent embolus, and in aneurisms, digitalis is absolutely contraindicated. But, again, it is indicated, remarks Romberg, whenever this contraindication ceases to exist, when the danger of myocardic feebleness is greater than the perils which may result from an augmentation of blood pressure. In cardiac weakness of renal cirrhosis digitalis gives at times very fine results.

The action of digitalis is decided, even when the systolic pressure remains the same. The augmentation of the amplitude of the blood wave (the difference between the systolic pressure and the diastolic pressure) is in fact of greater importance than the elevation of the systolic pressure alone, because it implies an augmentation of the quantity of blood which passes the aorta in a given unit of time. This augmentation is necessarily accompanied by an augmentation of the speed of the blood stream.

The slowing of the pulse in diphtheritic myocarditis and that of typhoid fever, does not constitute a contraindication to the administration of digitalis.

Indications of the action of digitalis.—Diuresis is the most sure evidence that the action of digitalis has been realized. The diminution of the number of pulse beats is a far less certain evidence.

The method of Plesch threw a new light on the action of digitalis in decompensations. The following is an example cited by Kraus at the last meeting of German Naturalists and Physicians at Koenigsberg.

Notes on a case.—Man, age 38 years, attacked with chronic insufficiency of the myocardium, initial insufficiency of the myocardium, and initial insufficiency of muscular origin. Dropsy.

BEFORE TAKING DIGITALIS	AFTER TAKING DIGITALIS
Weight, 82 kg. (180.2 lbs.)	77 kg. (161 7 lbs.)
Respirations, 33 per minute	24 per minute
Pulse, 120 per minute	67 per minute
Blood pressure, 78-120	85-130
Volume of blood passing the aorta per minute, 10.95 liters (17.5 quarts)	10.44 liters (11 quarts)
Heart's work in a minute, 20 71 kg.-meters (212 foot-pounds)	17.50 kg.-meters (125 foot-pounds)
Oxygen used per kg. in a minute 6.42 Ccm.	5.16 Ccm.

The diminution of the body-weight is due to the diuresis. The diminution of the

oxygen used is an indication of a better utilization made of the oxygen carried by the blood into the tissues. Lastly, the air seems to pass better from the lungs into the blood, perhaps on account of the disappearance of the edema from these viscera.

But that which follows most clearly from the above table is that the augmentation of the amplitude goes hand in hand with the great improvement of the general condition and the disappearance of the edema. Now, this disappearance of the edema is contemporaneous with the vital metabolism of the organism. This is a significant fact, and throws a new light on the beneficent action of digitalis, that heroic remedy of which the celebrated Naunyn said, "Without digitalis I could not be a physician."

The official school uses digitalis in the form of its powdered leaves, or their tincture or extract, because these contain the crystallized digitalin and that digitalin whose action, although not identical, is parallel with it.

Dosimetrists (alkalometrists) make also use of heart tonics and combine in one granule both synergic and associative remedies. Such is the compound cardiotonic granule whose components are digitalin, strychnine and iron. This mixture answers all the requirements of a good digitalis-like acting remedy, and should be given in doses of one granule every one, two or three hours until manifest effect. When time is pressing we may associate with it stanol (a mixture of caffeine and theobromine) in the dose of a teaspoonful two to three times a day. In cases of greater urgency, strophanthin may be given in doses of two or three granules; all these at the outset of a digitalis treatment. The action of strophanthin is rapid but transient; it permits us to gain time and to wait without danger till digitalin displays its effects, somewhat later but so much the more powerful and life-saving.

Association of digitalin and atropine.—This association is interesting from the viewpoint of the amplitude of the systole, since atropine augments the number of systoles, from which fact results a multiplied beneficial effect of the digitalin. This idea is so much the more commendable, since atropine is also indirectly diuretic. Yet, practically, I should not dare recommend a parallel

association. Why? Because Cloetta has lately demonstrated that the diastole acts purely passively and is accompanied by a reconstitution of the dynamogenic element of the myocardium. To abridge this restorative phase would be an act of medical improvidence. Let us always remember that back of the disease there is always a patient.—DR. ROBERT TISSOT, in *La Dosimétrie*, Jan., 1911, p. 12.

A CASE OF PSEUDOHERMAPHRODITISM

At a meeting of the Société de Science, Paris, Lucas-Championniere showed the photograph of a bearded female who had been married for twelve years to a man and to whom she gave full satisfaction, first, because she worked like a man, then, because she had no children. Her breasts were extraordinarily developed, and she had a pseudovaginal cul-de-sac which for twelve years had served the purpose of coition perfectly. This woman had a hypospadias. She became noted at fairs as the bearded woman. Later she became very fond of young girls.

Gainard related the history of a widow who, for a long time, had as a companion a person supposed to be a female but who ultimately was recognized as a man, whom she then married.—*Gaz. des Hôpitaux*, 1910, p. 10.

SATISFACTORY DIAGNOSIS

A peasant once came to a recently settled young physician and told him a long story of his complaints. The man was evidently a hypochondriac. The physician after close examination could find no lesion, but unwilling to acknowledge himself ignorant, and because he was a recent arrival, he spoke as follows to the peasant:

"My friend," said he, "I can tell you very exactly what ails you. It is this: the nucleus of your protoplasm has invaded your intercellular substance."

The peasant was visibly affected, and declared that none of the many physicians whom he had consulted told him anything about it, and yet the thing seemed perfectly clear to him now. The physician then pre-

scribed a potion and the innocent peasant went his way.—*Naturwissenschaftliche Vortraege fuer die Gebildeten aller Staende*, von Dr. J. Reinkel.

FRIGUSIN AND BROMOPHOR

Frigusin contains the active agent, diiod-larizinic acid. It is the first of a new group of medicaments. Applied to the skin it hardens like a strongly adherent varnish and gives off iodine without causing irritation. It is useful in the treatment of chilblains and of small wounds, in place of iodoform collodion. Areas covered with frigusin may be washed with water, cold or hot.

Another member of this group is bromophor, used against itching of the skin and erysipelas.—*Münch. Med. Wochen.*, 1910, 279; in *Pharm. Zentralk.*, 1910, p. 131.

BISMUTH-KAOLIN FOR BURNS

An excellent remedy for the treatment of burns is said, by L. Renner (Merck's "Annual Report," XXII, p. 149), to be a mixture of one part of bismuth subnitrate and two parts of kaolin. The affected part, after being cleansed, is thickly covered with this preparation, and then dressed with gauze and wool. In burns of the first and the second degree healing takes place comparatively rapidly under this dressing. When there is much discharge, the application of the powder must be renewed daily, and, if necessary, partial or entire baths must be ordered. As soon as the scab which forms begins to loosen, borated vaseline should be applied.

EUPNEUMA (ATROPINE METHYL-BROMIDE) FOR ASTHMA AND HAY-FEVER

Eupneuma, a specialty introduced by Ritsert and which has given very good results in asthma when used as a spray, as described by A. A. Friedlaender and other physicians (Merck's "Annual Report," 1908), is a solution of 0.3 Gram (grs. 5) of atropine methylbromide, 2 Grams (grs. 30) of subcutin, and 1 Gram (grs. 15) of anesthesin, in 100 Grams (ozs. 3 1-3) of liquor stramonii, which latter is prepared by a special method.

By means of a suitable atomizer this fluid is applied to the nose in the form of an extremely fine spray. It is claimed to give excellent results in nervous bronchial asthma, in spasmodic asthma, and in hay-fever.

ERGOT IN ATONY OF THE BLADDER

A writer in *Therapeutic Medicine* (Oct., 1910, p. 388) advocates ergot in atony of the bladder, on the assumption that its action is analogous to that on the uterus. Whatever the rationale may be, it is claimed that 10 minims of the fluid extract in one ounce of cinnamon water, three times a day, produces very beneficial results. The same or a somewhat larger dose (15 minims three times a day) may be given in prostatic enlargement accompanied by hematuria.

THE POWER OF RIGHT

"The good right," says the late lamented Dr. Lamsdæte, "has no need of resorting to violence, either in words or in acts. An honest will, calm, free, and loyal, has an enormous power. It overcomes more obstacles than does passion, which is always liable to compromise even the best of causes." We approve these noble words. It is by an honest, calm, free, and loyal will that we overcome all the obstacles which may be opposed to dosimetry.—DR. BURGGRAEVE, in *Le Repertoire Universel*, 1878, p. 206.

BACTERIA BECOMING ACCUSTOMED TO ANTISEPTICS

Louis Masson undertook to find out whether a race of bacteria, when becoming accustomed to the action of increasing quantities of an antiseptic substance, presents a certain degree of fixedness.

Experience has shown that the sterilizing dose, measured by the bacterias' accustoming themselves to a given antiseptic, varies for every species in a way that they may be compared. A bacterium, when it adapts itself progressively to noxious doses with increasing amounts, finally arrives at a point of resistance to the antiseptic beyond which it can not pass, and this is followed by a rapid diminution: it at first loses the power

of the acquired resistance, and in some cases may even acquire a sensibility greater than it had at the beginning. In other words, the accustoming of a bacterium to increasing doses of an antiseptic is but a temporary phenomenon; the acquired property is always followed by a return to just the initial resistance. This is an instance of the resistance of species to variation.—*La Médecine Orientale*, No. 3, 1910.

URINE IN CARCINOMA

Drs. Salomon and Sayl presented to the Gesellschaft der Aerzte in Wien, on December 10, 1909, a preliminary report on the characteristic state of the urine in carcinoma-patients. They found in the urine of such patients an increase of the oxyprotein acids amounting to from 2 to 3 1-2 percent in the nitrogen of the urine excreted by them. The relative quantity of the excreted acids in proportion to the nitrogen found in the urine remains constant and is not affected by either the nitrogen of the ingested food nor by starvation, cachexia, exudations, and cell-disintegration. The oxyprotein acids are derivatives from albumin and are very likely polypeptides. The quantity of these acids is far less in the urine of healthy and sick individuals than in the urine of carcinoma patients. It is remarkable that pregnant women also excrete greater quantities of oxyprotein acids with their urine. The spoken-of condition of the urine denotes a specific disturbance in the decomposition of the albumin in carcinoma-patients. Dr. Freund called attention to the investigations made by Toepfer, and said that in his laboratory the conditions mentioned are made use of in the diagnosis of carcinoma.—*Wiener Med. Wochenschr.*, 1909, No. 51.

FIBROLYSIN IN URETHRAL STRICTURES

Trautman says, in the *Dermatologische Zeitung* (12, 8) that experience teaches him that fibrolysin injected intravenously is a preeminent remedy in the treatment of urethral stricture, and facilitates dilations in almost impermeable strictures.—*Muenchen. Med. Wochenschr.*, 1909, p. 2335.



Modernizing Textbooks

OUR editor, in the December number of THE AMERICAN JOURNAL OF CLINICAL MEDICINE, calls attention to the fact that many of our medical textbooks, as modern authorities, only endure for a few short months or years. This is undoubtedly true. The changes in ideas, both in medicine and surgery, are so rapid that, even when one follows them in the various journals, he is kept busy.

Of course there are some textbooks which furnish a certain few facts which are down-to-date at all times. For example, no one would ask for a better authority on the alkaloïds than an edition of Brunton a dozen or more years old, but in other respects there are many things known at this time which Brunton knew nothing of in the early nineties. Many things which have appeared in the older editions of all our textbooks have been tried and found wanting, despite their popularity for the time being, and the later editions have either only given them passing notice or have dropped them completely.

In the therapeutic world, with the passing of every decade and the issuing of a new pharmacopeia, we find that a new edition of every textbook appears, and if the doctor would be "modern", he must throw out all of his old sources of reference and stock his shelves with the newer editions. It is true that the journals contain matter which is down-to-date at all times, but the average doctor frequently sees but one or two such publications and fails to get all the meat there is in the nut. Both the textbooks and journals need modernizing, the former to a far greater extent.

There should be a medical journal published which would give an epitome of all

the better facts advanced by all of the other journals published, in other words, a journal in which the facts are boiled down and all of the extraneous and worthless matter deleted. Such a journal, if published quarterly, would be modern in every respect.

In order that a textbook be modern at all times, I would suggest that, instead of the publishers furnishing permanently bound books, they adopt the loose-leaf system and that, instead of issuing whole new editions, only such revisions as might be deemed expedient from time to time be furnished. This could easily be done and would tend to keep all textbooks modern at all times. Such books, in their first editions, could be sold outright and the revisions furnished at so much per page or sheet. The covers of such a book should be sufficiently expansive to allow the doctor to retain such old pages as he deemed fit or, as in commercial loose-leaf systems, a transfer binder could be furnished for the out-of-date leaves. An encyclopedia, operating under this system, is extensively advertised and, I understand, is found to be very satisfactory.

I have noted in several new editions of standard textbooks that but comparatively few radical changes have been made, in some only the addition of a few new ideas have appeared. With the loose-leaf system, such new ideas might have been furnished at a much earlier date, and incorporated within the binder, thus furnishing the doctor a new edition without his having to wait for years for a modernized revision. While the initial cost of such a reference book might be slightly above an edition in a permanent binding, to be renewed every five or ten years, the ultimate cost would be

less and the doctor would be assured, at all times, that he has the latest ideas at hand at all times.

Although it is now almost five years since Wright first published his ideas regarding the opsonic theory, it is only recently that any note of this has been made in the textbooks. Ehrlich has, within the past month, introduced his famous "606" remedy for syphilis, but it will probably be either months or years before this is mentioned in the textbooks, all depending upon when new editions are published. If the loose-leaf system of reference books were in vogue, it would be only a matter of a few days, practically speaking, until every publisher would have sheets covering this subject off the presses and ready for distribution to the holders of their textbooks.

The editor says that we should index our journals, and I agree with him in this. But I would ask him if it is not possible that a good many items printed today would not be ready for the literary graveyard a year from today? I believe that they would, and I still contend that, in order that the doctor get the best of everything published, he should have a review, at least every three months, of all the best medical literature of the journals and that his textbooks should be supplied in loose-leaf binders and also furnished with continuous revision sheets of the subject-matter, daily if, on occasion, it be thought necessary.

There is not a day but that someone comes forward with some new idea, and not infrequently, as has been clearly shown, such ideas are fallacious, at times in the extreme. Such being the case, we must cull our journals carefully, accepting only that which has merit. As a rule, the fallacy of ideas is shown within a short time after they have been advanced, and a quarterly review of all of the medical journals would bring out only the points of real worth ignoring the reverse.

If the editor will give us the loose-leaf textbook and the quarterly review of all of the journals, he will have solved the problem of keeping medical literature at the modern point at all times.

GEORGE L. SERVOS.

Fairview, Nev.

[The first suggestion of Dr. Servoss is already pretty well provided for in the abstract department of a few of the larger weeklies, but particularly in *The Medical Review of Reviews* of New York City, now edited and owned by Dr. W. J. Robinson, 12 Mt. Morris Park, West. The loose-leaf idea has a "germ" in it and deserves consideration and expansion.—ED.]

PIN IT ON THE OFFICE DOOR

Forget your kids, forget your wife,
Forget the days you rocked her,
But while forgetting don't forget
The debt you owe the Doctor.

A. D. HARD.

Marshall, Minn.

ARSENOBENZOL AND THE QUACKS

It is hardly a matter of surprise that a discovery like that of arsenobenzol as an efficient remedy for spirochetal diseases should be eagerly seized upon by the unscrupulous advertising practitioner and should have been "worked" for all there is in it for the exploitation of the unwary patient and for the greater good of the quack's pocket-book.

Even before arsenobenzol was put on the market, advertising quacks in Germany offered to treat syphilitics with the remedy and did inject some sort of a medicine (atoxyl, we suspect) which they claimed to be the famous "606" and for the administration of which they charged enormous fees.

Since Ehrlich's new remedy has been placed on the American market, the Sunday papers of New York, Boston and Chicago, to our certain knowledge, and we presume, those of other cities, have carried an advertisement by a concern in New York doing business under the name of "The '606' Laboratories," and offering to supply salvarsan, or "606" upon receipt of \$30.00, in a plain, unmarked package, which is to contain the necessary dose, with simple directions.

Not only do these people pretend to supply the new remedy without any authorization whatever (the New York agents having denied, on inquiry, that they have supplied these "laboratories") but they also make the most lying and misleading statements and

studies, which have given him world-wide fame in spite of his personal modesty and reticence, have found favor in the eyes of the august surgeon of the "windy city."

I am thinking what a howl would go up from among the elect and the leaders (save the mark!) among the Chicago profession if anybody else should dare to charge such a fee. The accusation of commercialism and quackery and of unprofessional conduct would be heralded against the unfortunate offender. Really, Mr. Editor, the spectacle of the high and mighty in the land is edifying, and in its results it would be worth emulating if the following of such an illustrious example were not found to be visited upon the luckless followers with such dire punishment. Truly, it is a funny world.

"BLANK."

HOE OUT YOUR ROW

If the landscape's lookin' lonesome,
And the earth is cold and bare,
With a skift o' snow upon it,
And a chill is in the air;
If your outlook's rather gloomy,
And a doubt is in your mind,
As to what the future's bringin'
To the plans you have outlined.

If your life seems sad and cheerless,
And your work is hard to do,
If your job is rather irksome,
And you sigh for something new;
Just remember that you're only
One among the millions 'round,
Workin' on the same old problems,
And a worse lot might be found.

That same landscape's goin' to change soon,
That same sky will soon be clear,
When the sun comes out from hidin',
That cold snow will disappear.
Down below the crust, the grass is
Just awakin' from its nap,
And the little buds are hungry,
For their springtime feast of sap.

When the seasons in their routine,
Just turn over in their sleep,
Yawn and stretch, then wake and hustle,
You can see the verdure creep
Over all that hare brown landscape,
'Till the world laughs loud and long,
While the blossoms burst with fragrance,
And the birds take up the song.

Then's the time for you to wake up,
Learn a lesson of your own,
And remember that the harvest
Must be planted 'fore it's grown;
Make the best of what's before you,
Grit and push are bound to show,

And until things come 'round your way,
Keep on hoein' not your row.
HOMER CLARK BENNETT.
Lima, O.

THE METRIC SYSTEM AND "GOOD, PLAIN, EVERY-DAY ENGLISH"

In many articles contributed to medical journals, I find the author of the article, either through thoughtlessness or in order to impress the reader with his profound knowledge, has to a certain extent defeated his purpose. He has (like Dr. Waugh in some of his articles in *CLINICAL MEDICINE*) filled his article full of references to milligrams which the average physician does not understand. The average doctor does not think in milligrams. Gm. .0005 does not convey much to his mind, but 1-134 grain does, because it is the system he is accustomed to. The same thing holds true in regard to many foreign words and phrases. They are to him as a blank. To be sure he can look up these things, but even then he has to change them into English before he can comprehend them.

Who can realize, for instance, the amount of 10,000 francs until he changes it into American money? If you say \$2000 he at once comprehends your meaning without any figuring. If you say 1-25 of an inch we know what you mean. What we want is good, plain, every-day English, to which we are accustomed and which we can understand without the aid of a dictionary or scale of equivalents at our side.

I have no objection to an author using the metric scale, but he should realize that the average reader is not familiar with it except in the English equivalent. I am somewhat familiar with it, but I cannot think in the metric system. I have to first convert it into the English equivalent before I can realize what the dose is, or its size.

Now don't you think it would be a good thing to speak about this matter editorially? I have spoken to many doctors about it and they all condemn the double standard. They are at sea with the metric system. They cannot use it and do not wish to be bothered with it.

L. H. JONES.

Wall Lake, Ia.

[Doctor, I am glad you brought this up, as I think it is a matter of a good deal of importance. I agree with you with regard to the interpolation of foreign words and phrases into articles intended for the general reader. It is rare indeed that the writer cannot express his thoughts in English, and far more forcibly than he can in a foreign language—at least so far as his audience is concerned. I fear that most of the quotations are begotten in conscious pride of real or fancied erudition. What pleases *us* most is the crisp, straightforward, straight-to-the-point statement of fact—and in words of one or few syllables. Brethren, avoid the *appearance* of wisdom. Get down to brass tacks!

But as to the metric system, I can not agree with the brother—not exactly. I *do* think it is wise to print the metric terms with English equivalents; but I also think it is important that physicians should become thoroughly familiar with metric weights and measures. This system has been accepted by scientific men everywhere, primarily on account of its *simplicity*. Any intelligent man can master it by two or three hours of study, and once mastered it is easy to learn to *think* in it. All original scientific investigators employ it; it is used in more and more of the textbooks, and will eventually be employed by all; it is in common use in practically every civilized land in the world except England and the United States; you can not go to a medical or other scientific society meeting without hearing it constantly. Finally, the dosimetric idea of measured dosage is fundamentally metric, and that (even though you may not realize it) is one of the factors making for its popularity and strength.

No, Brother Doctor, I wouldn't "knock" the metric system. I would learn it and use it—use it at every opportunity.—ED.]

A NOVEL CAUSE OF DEATH

One of our readers sends us the following, clipped from the local paper:

James O'Connell received a letter from his cousin, William O'Connell, sheriff of Kalespell, Montana, stating that a sister of his died of Suprarenal Capsules, or Addison disease in South Dakota.

Respectfully referred to Dr. Wilbur of the Census Bureau for proper classification.

A CASE OF SPASMODIC CROUP

Here is a little experience that I had recently with spasmodic croup.

I was called to see a little boy four years of age who had been sick for nearly a week with spasmodic croup. Another physician had seen the patient twice before I was called, and as the disease had been running for a week I thought something else must be the cause of so long a sickness. I gave him a thorough examination and found no elevation of pulse, no temperature, but difficult breathing with the most stridulent cough that I had ever heard. I asked them if he breathed so all the time and they said, "No, only at night."

I thought, now is my time to try to "brown iodide of lime," of which I had a fresh supply. With all the assurance I am capable of giving, I assured the family that croup was an easy disease to cure and told them to watch the magical effect of the medicine, which would do wonders within a few hours. After administering a mild cathartic I told them to give the brown iodide every thirty minutes until relieved. I placed 10 grains in two-thirds of a cup of water and ordered teaspoonful doses of the mixture.

After that I came home, driving about ten miles through a very cold storm. In forty-eight hours they again sent for me and said that the boy was dying. I arose from my warm bed and went that cold ten miles as fast as my horse could carry me, only to find the boy almost lifeless from strangulation. I immediately saw that something had to be done, and that quickly, too, to save the boy's life. In my case I had some fluid extract of lobelia of which I gave him five drops. I then steamed him, under a blanket, with vinegar and water, which relieved him somewhat in a short time.

I came home, telling the family to continue giving two drops of the lobelia every hour, until the boy was relieved entirely, and that did the business. All he required was relaxation. There was only a slight return the following night of the difficult

breathing which was quickly relieved with the lobelia.

I write this only to show that a doctor must be full of other resources if one thing should happen to fail him in time of need.

R. K. PALMERTON.

Cannonsville, N. Y.

[Surely! If the case was purely neurotic, as seems from the description, it was not calx iodata that was needed but an anti-spasmodic; and he got a mighty good one in lobelia.—ED.]

BISMUTH EMULSION USED IN A FISTULA, FOLLOWING FRACTURE

On Oct. 20, 1910, I was called to see Mr. B., living six miles in the country, who had been injured while pulling stumps with a block and tackle. I found the patient with a wound in the left shoulder, resembling a gunshot wound. On examination of the clothing it appeared that some missile had gone through it, carrying quite an amount of material into the body. I probed the wound but could not locate anything. As it was evening, I put on a temporary dressing and resolved to wait until morning before investigating further.

The next morning, having secured proper assistance, an anesthetic was given and a T-shaped incision made about the center of the scapula, just above its spinous process, following the course of the wound upward and inward. After about thirty minutes of exploration a portion of a link of a chain, about 9-16 inch in diameter, was found imbedded in the first dorsal vertebra. In entering it had fractured the first rib at the tuberosity, and also the tubercle of the vertebra.

On removing the piece of iron the fractures were found to be comminuted, small pieces of bone were taken out, and, also, fragments of clothing. The wound was then cleaned and packed, drainage was made about five inches below the seat of injury and to the left of the spine about three inches. The temperature was 102° F., pulse 50 and intermittent, respiration 17. I gave digitalis, nux vomica and echinacea every two hours.

October 24, the temperature was 98.4° F., pulse 76, respiration 17. The packing having been removed, two drainage tubes were inserted. October 25, the temperature was 98.2° F., pulse 68, respiration 18, and these remained normal during treatment.

I now had to deal with a deep suppurating wound, which was dressed every day; although the process of repair had been considerable, suppuration was persistent.

On November 11 I prepared a paste of bismuth subnitrate as suggested by Beck, mixing one part of bismuth with two parts of petrolatum. After removing the drainage, and heating the emulsion in a water bath, I injected the entire cavity with the emulsion, put on a compress and roller bandage, and left it forty-eight hours. November 13, on redressing, I found that suppuration had diminished. After irrigating I injected the emulsion as before. November 15, on removing the dressing, I found very little pus, and at the following dressing none at all. The wound was still open and was dressed every other day, using only sterilized water. In one week it was entirely healed.

I believe had the bismuth emulsion been resorted to earlier the repair would have been much more rapid. We must thank Dr. Emil G. Beck of Chicago for the suggestion.

G. L. B. ROUNSEVILLE.

Milladore, Wis.

[The suggestion of the utility of the bismuth-vaseline paste was first made by Dr. Emil G. Beck of Chicago, in *The Illinois Medical Journal*, April, 1908. A splendid article, telling of the application of this method to the treatment of rectal fistulas, was contributed by Dr. J. Rawson Pennington of Chicago, to the January, 1909, number of *CLINICAL MEDICINE*. For details concerning technic we refer our readers to that article. The method is applicable in almost any condition where there is a pus-discharging fistula that refuses to heal. Dr. Beck has had exceedingly brilliant results in the treatment of Pott's disease, of which the psoas abscess is one of the most menacing complications.

It is important that the paste be carefully prepared, under aseptic conditions. The formula employed by Dr. Rounseville is generally applicable, though it may be made a little stiffer, if so desired, by the addition of about 5 percent of white wax. In some cases Beck adds one percent of formalin. Prior to using the paste the fistula should be dried out carefully and packed with gauze, which should be removed just before injecting.

In all these septic cases the physician should not forget that we have two remedies which actively combat the suppurating process. These are calcium sulphide and echinacea. Give them always, and in large doses. Cases presenting these fistulous and abscess cavities, which resist treatment, are good ones for treatment with autogenous vaccines, made by cultivating the germs present in the infected tract, these germs (dead) to be injected into the body of the patient, the purpose being to raise the opsonic power of the blood, according to the theory of Wright. These vaccines are extensively used in veterinary practice, with fine success; they should be tried more frequently in human medicine. The principal objection is the price, since a special vaccine is required for each case treated. However, the laboratory charges are not usually high.—ED.]

SUCCESSFUL HANDLING OF PNEUMONIA

I have been in general practice thirty-odd years and, of course, in that time have seen a good many cases of pneumonia. In the early years the cases of pulmonary congestion that I saw (and we didn't know anything about bacteremia then, and had to depend on *clinical* signs and symptoms), with scarcely an exception, went on to the classical course of the disease. In the last fifteen years less than 10 percent of the cases of pulmonary congestion to which I am called *in the early congestive stage* go on to develop the classical sequence or stages of pneumonia.

Now, do I suppose that we have developed a pneumonia that *naturally* tends to abortion? Nay, nay, Pauline! the death-records don't read that way. Pneumonia

has climbed to the terrible point of being called "Captain of the men of Death."

Do I suppose that I have lost my ability to diagnose pneumonia in its congestive stage? No, I really think that I am a better diagnostician than I was thirty years ago. So I am forced to the belief that I have several hundred reasons (being the congestive pulmonary cases *not* going on to fully developed pneumonia) for believing that pneumonia can be aborted therapeutically.

My own method of treatment is as follows: Clean out with calomel, podophyllin and salines till thoroughly clean, and keep up the saline laxative every morning. Rub the chest well with a mixture of oil of turpentine, 25 percent to 50 percent, and melted lard, and apply a cotton jacket. After cleaning out, start with the triple sulphocarbolates, 60 to 90 grains daily, and keep this up till convalescence is assured. If the sulphocarbolates (given always in solution) do not keep flatus down, I add small doses of oil of turpentine occasionally. I always watch the gastrointestinal tract very closely in pneumonia, as I consider it the critical ground in the battle. I do not believe we should have as many failing hearts in pneumonia if the blood was not previously poisoned by intestinal toxins.

In the onset I occasionally give a dose or two of morphine for chest pain, but later depend upon bryonin and hyoseyamine. For equalizing the circulation and controlling pyrexia, I depend on the defervescent compound (aconitine, veratrine and digitalin), changing its proportions as indicated by systemic conditions. Unless called for I do not give strychnine early in the attack, but if the case be asthenic I use the dosimetric trinity with strychnine arsenate in place of the veratrine of the defervescent compound. These are always given in solution and at intervals of one-quarter to one-half hour, then hourly, or less often, as temperature comes down and circulation is controlled.

I keep up the administration of nuclein throughout the attack, giving it if necessary, hypodermically, in doses of 10 to 20 minims at the start, followed by the same dose, given on the tongue, every four to six hours.

Where prostration is great at the start I give quinine, 3 grains, and capsicum, 1 to 2 grains, every two hours for a few doses. This and the nuclein to boost hyperleukocytosis.

I give plenty of pure water, but not cold water, throughout the attack, in order to promote elimination through skin and kidneys. I feed with small meals of rich, concentrated food at short intervals, increasing quantity and lengthening intervals as convalescence comes on. Sleep and rest *must be had* and I secure it by proper medication if necessary.

Cough is controlled if irritating and ineffectual, by heroin hydrochloride, in 1-24 to 1-12-grain dosage. Later, if the secretion is not raised freely and easily, I give sanguinarine nitrate. In old people where this latter condition occurs, I use a great deal of calcium sulphide and always with good effect.

I keep the patient in bed until I feel sure that danger of cardiac failure is over and usually prescribe the arsenates of iron, quinine and strychnine, with nuclein, to promote convalescence. Great care is taken to keep the environmental and personal hygiene of the patient good throughout the attack and afterwards. Many times proper attention to these conditions will turn the scale of the fight for betterment.

W. C. POST.

Maquoketa, Ia.

[Pneumonia, though much discussed, is a subject in which we are always interested. Dr. Post's methods are splendid. No wonder that he has such fine success. I want to add just one suggestion: *Iodine* seems to have a specifically "unfriendly feeling" for the pneumococcus. Give it freely.—ED.]

EVERY NUMBER WORTH THE SUBSCRIPTION PRICE

Enclosed you will find check for \$2.00 for renewal to CLINICAL MEDICINE. I think without a question it is the best all-around medical journal there is published. The only trouble with me relative to it is that I want to read it all and do not have time to do so, but there is no number but

what is worth far more than the subscription price for the entire year.

LEVI D. JOHNSON.

Whittier, Cal.

DYSENTERY, PNEUMONIA AND HOMEOPATHY

Agreeable to your request in CLINICAL MEDICINE, I give you a bit of my treatment in a few familiar diseases, namely, hydro-diarrhea and dysentery. I remark without egotism, simply as a matter of fact, that in forty-five years of practice since the close of the War I have never failed to cure the above-mentioned diseases, and that with very simple remedies. Only within the past ten days did I cure two patients who were much alarmed about themselves because the discharges were so profuse and watery and accompanied with much pain. I treated them as I have all my cases of the kind ever since 1865.

I use the third trituration of "mercurius solubilis"—a small powder dry on the tongue every three hours till the discharges are natural—and a combination tablet of "chamomilla and colocynth" after each movement of the bowels. I have never seen a case so bad that this would not relieve and cure in short order. I used to treat rivermen in Wisconsin in the same way. They wondered how such small doses could effect such cures.

For dysentery I use "mercurius corrosivus," third trituration, every three hours, and also an enema of milk, molasses and water, equal parts, with a few drops of laudanum for the pain and straining, added as often as needed till the pain and straining cease (not oftener than once in three hours). I further give the "chamomilla and colocynth" tablet, one after each movement.

I will cite only two cases of dysentery because of their being the worst in my experience.

Thirty years ago, in Wisconsin, I was called to see three girls in one family who had been passing nothing but clear blood for three days, and one they had given up to die before they called me. I put all three on the same treatment, viz., mercurius corrosivus, th'rd trituration, every three hours, and hop tea for quieting; beside the enema

of milk, molasses, water, and laudanum every three hours. They were all healed and well inside of fifteen days.

When in Lima, New York, where I practised six years (from 1875 to 1881), I was called to see a gentleman who had been resorting at Hemlock Lake for two weeks and it seems had been subject to dysentery, and he told me, nearly died with it twice in the city of Rochester one and two years before. As I entered his room, he said to me, "I do not believe you can help me, but they insisted on sending for you;" to which I replied: "My dear sir, I shall have you on your feet in less than a week." "Well, you'll be a good one if you do," was his comment. I gave the same treatment as in the case of all dysenteric patients, and sure enough, the gentleman went on his way home within one week, happy, and money and thanks were free as water. I give you this bit of experience as facts that cannot be gainsaid.

There are two other diseases which I have been remarkably successful in treating, to wit, pneumonia and pleurisy with pneumonia. I have never lost a patient with either disease although I have had some tough ones. I recall particularly the case of a blacksmith, thirty-five years ago, down with "pleuropneumonia," who thought his end had come.

I applied witchhazel compresses on the chest, covered with dry flannel, changing only when dry. I added a teaspoonful of laudanum to the solution of witchhazel, and kept on this compress as long as the inflammation and pain continued. Internally I gave tincture of bryonia, a few drops in a cup of water for the pain or dryness of the linings of the lung or pleura. For the inflammation and fever I gave the tinctures of veratrum viride, aconite, and gelsemium, a few drops in a cup of water; one drug at a time, as judgment dictated according to conditions. Phosphorus, 3d, and bryonia, 3d, and tincture of ipecac were always my sheet-anchors for cough. These were used. The patient made a prompt recovery.

I read of a great many deaths from pneumonia, but cannot understand why there should be so many were they properly treated.

Now allow me to say, I believe in the alka'oidal and similar remedies, when used intelligently. As a rule, medicines are used too promiscuously, I believe, too many remedies in any given case and too heavy doses. I am using hyoscine-morphine with fine success.

CLINTON D. WOODRUFF.

Reed City, Mich.

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[I have many reports testifying to the value of corrosive sublimate in small doses, in the treatment of acute intestinal inflammation. The good seems to be lost if the doses are raised to the irritating point. Others besides homeopaths assert that colocynthin in minute doses is effective, especially when such attacks are attended with acute cutting pains. It is always a case for trial—we do not base beliefs on theory when we can apply the clinical tests. Say any and everything that may give us improved methods of curing the sick.—ED.]

"MEDICAL CHAOS AND CRIME"

A book that has been widely exploited through the lay press, and made the text for violent criticisms of the medical profession, as well as various animadversions on the part of portions of the profession against other portions, is Dr. Norman Barnesby's "Medical Chaos and Crime," which is offered for sale to the lay public. As soon as we saw the book and learned its character we said that it would do harm. We are borne out in this criticism by Dr. Wm. J. Robinson's scathing criticism in *The Critic and Guide*, some striking paragraphs from which we reprint herewith:

The author accuses the medical profession of cupidity, cruelty, brutality, ignorance, malpractice, sexual perversion, etc., and gives illustrative examples. As neither the names of those who are supposed to have committed the atrocities nor the places where the atrocities are supposed to have taken place, are given, we have no means of judging as to whether or not the author tells the truth. Maybe those alleged facts are creations of his imagination, or maybe he was too credulous, and in his desire to gather damaging testimony, lent too ready an ear to the stories of not always reliable disgruntled patients.

But let us admit that every statement in the book is true, that all the cases of cupidity, commercialism, ignorance and malpractice are actual facts; let us assume that the author has perverted nothing,

that he himself is honest and sincere and believes in the truth of everything he has written. Still the book is a lie, for it produces the effect of a lie. If a truth is wrongly focused it becomes distorted and *producing the effect of a lie, it is a lie*, as Maeterlinck says.

In every trade, in every profession, in every line of human activity, there will be found some men without a conscience, and if the isolated misdeeds of such men were gathered together and presented as the common practices of the profession or trade, that profession or trade would appear monstrous. For every case of commercialism, for every case of indifference, for every case of dishonesty exhibited by a member of the medical profession we could show ten cases of the noblest altruism, of the deepest concern, of the most wonderful self-forgetfulness and devotion to the patient's interest. And as it would not be right to claim that the entire medical profession consists of noble altruists, who never have any other thought but the patients' interests—though there are many such—so it is wrong, very wrong, to claim or to give the impression that the entire profession consists of commercialists and grafters, because a few of its members are such.

To the question: Will the book accomplish some good? I must answer emphatically in the negative. The medical profession certainly did not need it, for the most effective parts of the book, the most scathing denunciations of the abuses existing in our profession, are taken from prominent medical journals, *which is proof positive that we ourselves recognize the evils that exist in our midst*, and that we neither condone them nor gloss over them. We ourselves are the severest judges of our shortcomings, and both on the platform and in the medical press we do not hesitate to expose them and to lash them. And we need no outside critics.

As to the public, I have not the slightest hesitation in saying that with the exception of two chapters—on the quack and on anti-vivisection—which are very good, the effect on it will be extremely pernicious, and nothing but pernicious. If I could think of any good the book might do I would try to weigh it against its evil influence and find which outweighs the other. But I cannot. I see nothing but evil from a wide circulation of the book. We are all familiar with the layman's tendency to generalization. After reading the book he will become convinced that all physicians are grafters, all surgeons cruel butchers, that there are no high-minded honorable men among the medical profession, and that their sole object is to make as much money out of the patient as possible. What will be the natural result? When a person gets sick, he or she will delay treatment as long as possible, if in need of operation he or she will delay consulting a surgeon until the case has become aggravated or inoperable. And altogether by assuming a doubting or antagonistic attitude toward the attending physician or surgeon, the patient will in reality weaken his own chances of recovery. So what is gained by it?

No, from whatever point I look at it, I can find no *raison d'être* for Dr. Barnesby's work, except the vulgar one of a desire to make money from the sale of a sensational book.

HOW DO DRUGS ACT?

What is it in opium and its alkaloid that produce the opium habit? Is there any-

thing? Is not the habit produced by the drug mechanically, altering the normal anatomical and physiological conditions of the human body?

This is a very interesting study. Let us pursue it a little farther.

The whole subject comes up under the head of "How do drugs act?" Some close observer and acute reasoner has said that all actions and reactions are brought about by "contact of surfaces," and drugs are no exceptions to this rule. The organism presents a surface or surfaces to which the irritating facets or surfaces of the drugs are applied and from the reaction thus caused pharmacologic results follow.

Drugs are not vitalized entities, endowed with power to act. There is but one force at work—the life-giving principle of the organism, the *vis medicatrix naturæ*.

When a drug is introduced into the human system through the stomach, veins or in any other manner, the system or organism immediately begins to do something with it. And if let alone, to do the proper thing—it may be a bullet, a cinder or a grain of opium—the great human organism proceeds to take proper care of it. No difference what is done, the organism does it; hence we might as well say "food action," "cinder action," "bullet action," as to say "drug action."

Thus the question arises, If there is no such a thing as "drug action," why does our economy react differently toward different drugs? This question is dead easy to answer. Each drug is individual and because of this individuality nature attends to each differently. She takes care of a cinder in one way and mercury in another; of a bullet in one way and strychnine in another. To come down to a little chemistry, nature handles $C_{17}H_{19}NO_3$ one way and $C_{17}H_{19}NO_5$ in another. But it appears that she should handle morphine ($C_{17}H_{19}NO_3$) and piperine ($C_{17}H_{19}NO_3$) just alike. Yet she doesn't. Why? Haven't they the same chemical formula? Yes. Then what is the matter? Put on your chemical spy-glasses and look a little below the surface and you will see what's the matter.

If you examine the structural formula you will find that while they both read C_4H_{10} ,

they are not alike so far as the arrangement of atoms is concerned. So, when introduced into the human body, nature doesn't get hold of their "horns" in the same way and doesn't treat them just alike.

The chemical formulas of morphine and piperine are the same, both being $C_{17}H_{19}NO_3$, but the atoms are not arranged alike in each, and consequently nature does not react to them in the same way. In other words, there is a great difference between opium and pepper. Hence, when a dose of piperine is taken nature behaves in one way toward it, and in another way toward a dose of morphine. Why does she do this? As referred to above, the presence of a given drug in the organism causes a disturbance, because the atoms of its molecules are brought in contact with the atoms of the molecules of the cells of which our bodies are composed. The atoms of different drugs (morphine and piperine) are differently *polarized* and so to speak touch the organism unequally, and nature reacts differently.

Now, understanding this matter this way, why not synthetically alter the polarization of the atoms of the molecules of the morphine and piperine and constitute either piperine or morphine? Or, again, why not alter the polarity of the atoms of the molecules of morphine so that their facets might become so adapted to the atoms of the molecules of the cells of the organism that the morphine habit would not be produced?

Chemists take up a piece of opium and extract from it seventeen alkaloids. Why not take up morphine and "dehorn" it? Or so polish its facets that they would not so tremendously exhaust the powers of nature? Or, in other words, take out the objectionable features? This has been done with some of the components of opium.

Another thought: It is a well-known fact that some drugs have a primary and secondary effect, as castor oil, calomel, etc. At first they purge, then they constipate. Some drugs primarily produce stupor, secondarily insomnia. Why is this?

Looking at the matter every way it occurs to us that the primary result is brought about by the activity of the organism and the secondary result is a simple cessation of organic activity, or rest. Evidently there

is no such a thing as "blowing hot and blowing cold" with a drug. To blow or not to blow, that's the rub.

What has been said of opium and its derivatives can be said of any other drug. Camphor, indigo, madder, etc., are made synthetically, and we feel and believe that the day will come when the chemist will combine the atoms furnished to hand by nature and make them produce certain effects. When nature is not able to manage a drug, chemistry will modify it so it can be handled. Where the drug facets are too sharp they will be "polished down" by the substitution of others. When they are too flat they will be "elevated and sharpened," so that they may take hold of the atoms of the molecules of our organism.

These are just a few hints. Think on!

M. G. PRICE.

Mosheim, Tenn.

CALCIUM SULPHIDE IN SCARLET-FEVER

I was called to the country on January 18 to see a boy aged 14 who had been feeling poorly for two or three days but who had been urged and taught not to "give up" to the feeling of illness—who had, even on the evening of the previous day, helped with the chores on the farm. He had put in a very restless night and I found him with a temperature of 103.5° F., the scarlet rash already making its appearance.

I gave him the "clean-out" treatment and aconitine, together with echinacea and calcium sulphide, as this was a very virulent case, with severe throat symptoms and inflammation of the cervical glands.

This case had a slow recovery and at this date (February 15) the boy has not regained his usual strength.

It is of the other two children in this family that I wish particularly to speak—a boy and a girl, both younger than the patient referred to. At my first visit I left them a supply of calcium sulphide and they both cheerfully took it every two hours, while awake. They were not in any degree separated from the sick boy, but were in his room and helped to wait on the patient. The little girl had fever and sore throat on January 25. She was in bed only two days.

The rash was slight, but enough to make a decided diagnosis of scarlet-fever.

The other boy showed slight symptoms on January 30, and the father came to my office for his medicine, as he was "not ill enough to have a doctor." The child refused to go to bed at all, although he had a slight rash. I was called again to see the first patient on February 4. I found the second boy and the girl looking and feeling as well as ever, and the parents had difficulty in keeping them in the house.

The first child was still in bed, with no fever, but very weak; glands of neck still swollen; throat and nasal passages ulcerated; and a thick yellow discharge with a very disagreeable odor. His body was literally covered with large, heavy scales. An antiseptic and healing spray soon cleared up the nasal canals and throat. The magnesium-sulphate bath was ordered to help clear up the skin, and I left him on the iodide of arsenic. I saw his father today and he reports that the boy is able to sit up now most of the day and is slowly regaining appetite and putting on some flesh.

This was one of the most severe cases and the slowest to recover that I have ever treated. The other two cases were just the opposite, owing, I believe, to the use of calcium sulphide.

CHARLES S. STRAIN.

Rochester, Mich.

[In the first case, Dr. Strain saw the patient after the disease was fully developed, probably too late for any decided modification of its early stages. But we must wonder what would have been the result if this child had received the energetic and able treatment given the two other patients before it had "come down." There is certainly good reason to believe that it would have escaped the long siege of illness.—Ed.]

PARASITIC SKIN DISEASES

I have been on the point of submitting to you my treatment of the parasitic skin diseases for some time, especially of ringworm of the scalp. I apply iodine-petrogen, 5 percent, to the infected area, then dissolve one mercury cyanide tablet in half a pint

of water and paint it on with a camelshair brush, until the surface over the iodine-petrogen area turns yellow.

Two applications a day for one week will eradicate most of the ringworms from the scalp without the necessity of draining the pus out. Barber's itch yields just as readily to this form of treatment. The resulting reaction is probably due to the formation of nascent mercury iodide.

G. W. POTTS.

Asbury Park, N. J.

[We confess our inability to locate "petrogen," though we assume that it is similar to vasogen, which is a compound of petrolatum, oil, ammonia, and iodine. Perhaps some of our readers can enlighten us.

On this assumption, there is no doubt that yellow mercury iodide forms from the contact with the mercury cyanide, the cyanogen which is released uniting with the ammonia. However, it is probable that the activity does not depend upon the "nascent" state, but rather upon the more intimate contact with the tissues, as well as with the parasites. Perhaps just as good results could be obtained by painting the skin with an iodine solution, and then with any solution of mercury, or *vice versa*.

The writer remembers a personal experience of many years ago, when he tried to dispel a boil with tincture of iodine, applied for several days continuously. Then, having heard of the virtues of "blue ointment," he put the latter on rather freely. But, whew! A most lovely inflammation developed, with the characteristic golden yellow discoloration of the mercuric iodide. The boil did very nicely!—Ed.]

THE CANADIAN MEDICAL ASSOCIATION JOURNAL

The Canadian Medical Association Journal made its appearance January, 1911. It is the result of a movement in the Canadian Medical Association toward the establishment of an organ of its own. The finance committee have appointed an editor and have acquired *The Montreal Medical Journal*, which is now merged into the new publication.

While we shall miss the visits of *The Montreal Medical Journal*, in which we have found many valuable facts and reports, we shall not find it difficult to transfer our good will and esteem to its successor, *The Canadian Medical Journal*. We congratulate our Canadian brothers on the establishment of their own journal, to which we offer our best wishes.

THE PROFOUND SLEEPER, AND HOW I MADE GOOD

"Air you the new doctor?"

This from a long-legged, sun-baked specimen that I instinctively knew came from the "scrub."

"Yes," I replied, "I am the new doctor."

Taking off his slouch hat and scratching his head in a contemplative way, he said: "Old man Bill Jones sent me in here to ax you ef you knowed anything to do for a fellow that has been sound asleep for five days and nights."

I said, "Oh, yes, I guess I can wake him up."

"Hold on, mister," he replied; "aint going to be no guessin' in this. Old Man Bill is powerful het up on this long sleep. He's done had all them old doctors out tha' and none of 'em could raise a har. Old Man Bill says ef you knowed how fur to do to wake the boy, then for you to come right out'n tha' and do it."

I saw at once it was up to me to make good or move. I also was very anxious to put one over on the old doctors. So into my bag I threw about everything I owned at that time and away we went to old Bill Jones's place, some twelve miles away. *En route* I asked many questions about the case, but received no satisfactory answers. There was always the same reply: "He is asleep and nobody can wake him."

I started out with a fine disregard for everything, thinking only of this chance to make good. The nearer I got to old Bill's, the more I thought of this queer business. I had no earthly idea as to what I could do or how. Then I had heard of old Bill and his temper. Well, I was into it and had to see it through! But I kept thinking of what I should do.

Arriving in sight of the place I was appalled. The scene was one not to be lightly thought of. Wagons, carts, saddle-horses, dogs galore. What with the neighing of horses, braying of mules, barking of dogs, the general holiday-look of things, I was forcibly reminded of a country picnic. Then, in the spacious front yard were men, women and children—all of the relatives and friends for miles around. As is customary in the country, this crowd of some two score met us in silence.

When I was just about half way from the gate to the house there came out of the door a tall, stooped-shouldered, gray-haired and bewhiskered fellow. He looked the commanding figure I had heard was Old Bill Jones. He came up close, looked me over with his keen old eyes, saluted me with "how-d'ye-do." Then everybody in turn came up to greet the new doctor. They had appraised me in their own way. Right there I would have given 'most anything I had to have known what their verdict was. You see this was my first call into this neighborhood and all depended on their first impressions.

By this time things began to look rather serious. Suppose I failed, after Old Bill's message to come "if I could do something."

Old Bill turned and walked toward the house, I following close behind him. He entered the door with me a close second. In a bare room, with wooden shutters tightly closed, the close, stifling air and darkness gave anything but a cheerful impression. After he finally opened doors and windows I found the interesting sleeper lying on a pallet, apparently in a peaceful sleep. He was a fine-looking specimen of young manhood. Sitting on the floor by the patient's head was a very comely young woman whom I rightly thought was the boy's wife. She looked up at my approach with the most pathetic and wistful look I have ever seen on a human face.

I took about ten minutes in looking the patient over. I could find no evidence of organic lesion. I attempted to raise his eyelid, but it was a job. His jaws were firmly set. He seemed well nourished. Out of the crowd of old women I singled out one. I questioned her up one way and

down the other to find out all I could about the case, including what the old doctors did and said about it. In fact, I was 'way out at sea and was killing all the time I could, hoping something would turn up before Old Bill called my hand. All this time the old man was standing close by, saying not a word, but his eyes right on me. I had made up my mind I had some kind of a case of hysteria to deal with. But how to prove it?

I knew, of course, that the old doctors had done every *ordinary* or *usual* thing to awaken the boy. So reasoned, it was up to me to do the *unusual* thing. Trusting to luck I staked all on one throw. Turning to Old Bill I asked for some lard. He got it for me. Then ordering the women out I lubricated my rectal speculum and remarked, before introducing it, "Mr. Jones, I will have him wider awake in five minutes than you ever saw him in your life." When I was attempting to introduce the instrument the patient rolled over, drew up his legs and kicked me and the speculum clear to the wall. This put me wise. Calling for four of the strongest men to hold the patient I went at him again. Now begun the most magnificent struggle I have ever witnessed. That boy handled those four big men like babies. It finally took eight to hold him till I could introduce the instrument.

Well, maybe I didn't wake him! I had him going over that floor kicking and cussing—nor was that all he did, either! Anyhow I kept at him till he swore he would not go to sleep again in a thousand years, and as I packed my instrument-case, everybody in the shack was happy.

On my way home, however, I could not help wondering what would have happened if I had not thought of that rectal speculum.

Florida,

S. L. E.

THE PENALTY OF FAME

I have been conducting a small private hospital for six years. Naturally, as I am working hard to build up a reputation, my fame is increasing, and I submit the copy of a letter from the cantaloupe town in Colorado, to show you the price of this valuable possession. I am queered on diagnosis,

and would like to have help from anyone who can give it. Incidentally, I will state that the writer enclosed ten bright new stamps of the 2-cent denomination and one green worth 1 cent. This is the letter, *verbatim et literatim*:

"DEAR SIR: For a week I have ben worse took cold it made my nerves worse the nerves of my bowels are in such a confesion so much gas and pain and run off to much. Gas in the somach and the fix my bowels are in and somach that causes a hot forehed and a dull pain in the back of my head. Please send some medsin to cure me. Find stamps enclose. To pay. Please send by return mail.
—Mrs. ———"

What shall I do?

B. W. SAFFOLD.

Alva, Okla.

PREGNANCY IN OLD AGE

In addition to those instances mentioned under the above heading, on page 330 of *CLINICAL MEDICINE*, March, 1910, we find that, according to Kisch ("Geschlechtsleiden des Weibes," Berlin und Wien, 1904, 1192), Renandin relates the case of a woman sixty-one years old, who was delivered of a baby, having conceived after the menses had ceased twelve years. Deshayes mentions the case of a woman fifty years old who conceived two years after the menopause. Capron reported the case of a woman sixty-five years old who bore a child, although her climacteric had been established at the normal age period.

COLD AND RHEUMATISM OF THE EYE

Usually an injury of the eye by cold is assumed only in so far as this makes the eye less resistant against the attacks of microbes, but a directly unfavorable action of cold on the eyes is denied. Bonsignorio (*Rev. Gen. d' Ophth.*, 1909, p. 296; abstr. in *Wien. Med. Woch.*, 1910) says that this is wrong. The numerous capillaries of the eye predispose it for a vasoconstriction, and the delicate membranes react intensely against any noticeable fall in temperature. The author asserts that, under the influence of cold, diseases in the eye develop rapidly. These should, however, not be called rheumatism. The latter depends, in his opinion, upon an acquired or congenital dystrophia, a vital

weakness of a particular tissue, which reacts especially to the influence of cold.

If under the repeated influence of the latter the same disease-phenomena always recur, then that which is called diathesis is present, according to Bonsignorio. As to the rheumatism of the eye, it may occur with or without other rheumatic affections in the body. It occurs most often during the cold season. The author includes among rheumatic eye affections rheumatic glaucoma, and diseases of the iris, choroid and pupil. One attack predisposes to the occurrence of relapses.

TWENTY-TWO YEARS' EXPERIENCE WITH PILOCARPINE IN TY- PHOID FEVER

I was graduated in the spring of 1886 and commenced practice at once in Lansing, Mich. My first case of typhoid fever was in March, 1888. The city had opened a big trunk sewer just above the dam in the river. In March the ice broke up in the river. At this time an epidemic of typhoid fever started in the first house near the river, above the dam, and extended all through the north part of city and out to the country along the course of the river. Their was a high mortality, and in instances the attacks were complicated by pneumonia.

In the beginning of the epidemic I lost three cases, one of typhoid and two of typhoid pneumonia. About this time I began having fever myself. My home was one and one-half blocks below the dam and my office was on the opposite side of river. I passed over the river many times each day and night. My bowels were very loose, I had nosebleed several times, and all the other symptoms of beginning typhoid; on the fourth day my temperature was 105° F. at 3 p. m.

I had read that large doses of quinine would reduce the fever, so took 40 grains of the drug at one dose. That evening my temperature was 105.5° F., and the quinine made my head feel very bad. The next day, at 5 p. m., my temperature was 106° F., and I began to realize that there were times when I did not know what I was doing. My wife was away on a visit, so I called up

my brother by telephone and asked him to come and take care of me that night, as I was very sick. I then closed my office, and called at a drugstore and got one ounce of the fluid extract of jaborandi. Then I went home. I do not remember much about what happened during the night. My brother said I told him when he came that I wanted him to give me a sweat and he did so, putting my feet in hot water and giving me hot drinks. I remember feeling better after I began sweating and went to sleep soon after.

About 5 a. m. I awoke and was still sweating. The sheets were so wet you could wring them. I seemed to be feeling good. I called for my thermometer and on looking at it I found that my temperature had been 106.5° F. sometime in the evening when I had taken it last. I then took my temperature and found it to be 97.6° F. I told my brother to get the room hot and a tub of hot water. When all was ready I took a hot bath and had him rub me dry. When dressing, I saw that the ounce bottle of jaborandi was empty and asked what he had done with it. He said: "You asked for it when I was giving you a sweat and drank it all. I supposed you knew what you were doing."

My bowels moved very freely that morning. I took my temperature several times a day for three or four days, but it never went above normal. I dressed very warm and did what no one ought to do—went out to see patients. I had several cases of typhoid fever on hand and at once began giving them good doses of jaborandi, a teaspoonful every half hour until they were sweating very hard. Two or three teaspoonfuls was about all that was ever needed. All the cases I had on hand recovered, and in several I saw the first day or two after they commenced having fever I broke the disease up in from two to four days.

I began at this time treating all cases of fever the first one to three days with good doses of jaborandi, followed by a dose of castor oil. In almost all cases at the end of the second or third day, if the fever wasn't broken, it was running a very mild course. After that, unless the fever ran up to 103° F.,

I never gave any jaborandi, but if it did, I gave another dose.

For the next eight years I used jaborandi in all cases of fever of any kind and didn't have a death. Then I commenced using pilocarpine nitrate instead of jaborandi. Since that time I have used pilocarpine nitrate in all cases of fever of any kind, scarlet, malarial or typhoid, with the result that since I commenced the treatment twenty-two years ago I have never had a death from any kind of infectious or contagious fever.

In the fall of 1903 we had an epidemic of typhoid fever and I treated in all 27 cases. I will give my experience with one family; October 1 I was called to see Mr. and Mrs. R. and found them both sick with typhoid fever. Five days later Mrs. R's people had them both removed to their home. Mr. S's family consisted of father, mother, and seven children at home. Mr. R's fever ran fourteen days and Mrs. R's twenty-one days.

October 22 I was called to see John, the oldest boy, and found him with a temperature of 104° F. and all the other symptoms of typhoid. I gave him at once 1-8 grain pilocarpine, and then 1-16 grain every half hour until two more doses were given, 6 grains of quinine to be given one hour after giving the last dose of pilocarpine. I also gave 1-40 grain strychnine sulphate every three hours. After sweating began to stop I ordered a tablespoonful of castor oil, also capsules containing 4 grains of acetanilid compound and 4 grains of ammonium chloride, one to be given every two hours. October 23 I found the temperature 101° F., and ordered treatment repeated. October 25 the temperature was normal. I ordered the capsules to be given, and also strychnine sulphate, with the castor oil if needed. He made a rapid recovery and had no more fever.

October 31 I was called again and found Clara, age 22, and Bertha, age 20, both sick. Clara said she had had fever four or five days. Her temperature was 104.1° F. Bertha claimed that she had had fever only one day. Temperature 102.5° F. I ordered for both the same treatment that I had given their brother John. November 1 Clara's

temperature was 102° F. and Bertha's 99.5° F. Again I ordered the same treatment. November 2 Bertha's temperature was normal and Clara's 100° F. Gave Bertha for the next two days the capsules and strychnine sulphate and she got up feeling good. For Clara I ordered another dose, and on Nov. 3 found her temperature still 100° F. Then commenced regular treatment. Her fever never went above 101.5° F., and on the twenty-first day her temperature was normal.

November 2, when calling to see the girls, the mother said, "We have two more sick today." I found George, age 18, with a temperature of 103° F., and Conrad, age 16, with a temperature of 102° F. I gave them the same treatment that I did John and on the third day Conrad's temperature was normal.

November 6 I found Charles, aged 8, with a temperature of 102° F. In three days his temperature was normal. November 18 I found Bertha, aged 20, with fever again. Temperature, 103.6° F. She said she had had fever five days but wanted to go to a party and didn't tell until after the party. Failed to break fever this time. It ran a very mild course, never going above 102° F. after pilocarpine treatment, but ran twenty-one days.

I found the cause of all the trouble to have been one of the women taking care of Mr. and Mrs. R. She was afraid to carry the slop out to the proper place one night and emptied it on the grass by the back door. I was at a loss to know where the contagion came from, as everything seemed to be kept very clean. Later the woman confessed to me what the cause of all the trouble was. There were a good many deaths in the city during this epidemic. Why did not some of mine die?

I could give the history of a great many cases, but it would take up too much space. In the twenty-two years I have been using this treatment I have found that if I could see a case of typhoid fever during the first two or three days I could abort it with two or three days' treatment. But if it was left longer, the mouths of the glands in the bowels would be smaller, so that presumably they could not be emptied of the germs and

poison in them. But it always makes the disease run a more mild course, as the pilocarpine cleans out some of the glands and stops inflammation in them. At any time during the disease, if the temperature goes above 103° F., I give the pilocarpine treatment to reduce the temperature. I never have had any bad results from the use of pilocarpine, and have given it to patients 80 years old, and to babies, in proper doses.

In cases of grip I find the pilocarpine treatment works like magic. As soon as the patient begins to sweat, he will tell you that the pains are all gone.

If you can see a case of pneumonia when a patient is having a chill, or soon after, you can abort it by giving large doses of pilocarpine. If the case is far enough along you may have the characteristic pneumonia sputum, the next day, but very little fever, if any.

G. L. GARNER.

Lansing, Mich.

[We do not believe in one remedy for many diseases, but we do believe in one remedy for one pathologic condition as manifested during the course of many diseases. The existence of an acute infectious fever is an evidence of the inability of the phagocytic garrison to defend the body against the onslaught of the invading army of microbes, and one therapeutic indication is to reinforce the defenders. Pilocarpine vastly increases leukocytosis, and its use is as direct as scientific as, and a heap better established by results than, that of many of the serums and vaccines. Dr. Garner has the strongest backing for the claims he makes as based on clinical observations.—Ed.]

"AN EYE EXPERIENCE"

"To everything there is a season and a time to every purpose under heaven."

I confess to a strong impulse to quote the above verse from Kolieleth in the original Hebrew, as also the following seven verses, for, to me there is more deep meaning in one word of Hebrew than in a paragraph of English, or in any other modern language. But I should only lay a burden on dear old

Father Epstein; and you have no Hebrew type in fonts. So anyone who cares to, may find a sort of translation in Ecclesiastes III, 1—8. But I am becoming more and more convinced that, if many valuable secrets of the healing art are to be found, we must come into close *rapprochement* with the Oriental practitioners, much of whose knowledge has somehow come into the possession of the Hebrews. If the "family," however, is disposed to put me down as a Jew, they mistake, for I am an Essex County Yankee for eight generations back on my father's side, and five generations back on my mother's. But this is only by way of parenthesis.*

And the thought comes to me, if "there is a time for everything under heaven," is there not a *use* for everything. Is it a far-fetched assumption that every plant that dots the face of earth has some mystic connection with or influence over some function of the body that especially fits it for a remedy for disorders of that function? I don't purpose to attempt to explain what—in my opinion—that occult relation may be; whether chemical, electric, psychic, astrological (I beg your pardon, Dr. Abbott, that was a slip of the pen), or whatever it may be, I will not even suggest, as you readers, I believe, want "straight medicine."

Some of us however will get over the fence, and it was this habit of mine that led me to try a certain plant in the treatment of four cases of incipient poliomyelitis, with perfect success, and I have furnished it in other instances as a prophylactic. I am not as yet ready to say what this remedy is, for I wish to test it still further, as leading to a curative result for some of the sequelæ of this mysterious malady. I only remark that I asked for it in scores of drugstores, and not one of them had ever heard of it, although it is mentioned in the U. S. Dispensary, and the homeopaths have it on their list, and one homeopathic pharmacy has it in stock. Only one of the manufacturing chemists, whose catalog I have, lists it. And the other remedy for the sequelæ seems to be known by only one house.

And all this is an aside. I started to tell of an eye experience. One of the plants most

*In this connection, isn't there a meaning in the Master's assertion to the woman of Samaria, "Salvation is from the Jews,"? (Translated from the Hebrew.)

neglected by the regular profession, although homeopaths use it in acute coryza, in which it is unexcelled, is *euphrasia officinalis*, known as "eyebright." As a remedy for the inflamed eyes in measles, in infants' sore eyes, when not syphilitic, and in that consummate nuisance, "pink-eye," it is perfection.

Of this plant Culpeper (A. D. 1653) writes: "If the herb was but half as much used as it is neglected, it would half spoil the spectacle-maker's trade. The juice or distilled water of eyebright dropped into the eyes for divers days together helps all infirmities of the eyes that cause dimness of sight. My experience is that its greatest use is in inflammations of the eyes that do not affect the optic nerve."

The synergist that helps it in this work I will notice later on.

On the fourth of July last I was down the harbor in a small motor boat. There was a strong wind that sent the spray over us in showers. At the turn of the tide on the ebb we were off Moon Island, where the combined sewage of Boston and the suburban towns is pumped up into immense reservoirs, and at ebb-tide is let out, with the expectation that it will be carried out to sea. Doubtless some of it is, but if you want to see a system of harbor pollution that is infallible, come to Boston and examine our "scientific" disposal of the excrement of over a million men, women and children, to say nothing of countless hospitals.

Well, a solid wave came over the port quarter, laden with this delectable compound, and deposited a batch over my left eye. There was no way of washing it out except with the contaminated water we were sailing on, so I had to wait for land.

That night I was taken with a burning sensation in my eye, and going to my chest for the *euphrasia* I found the bottle empty. The next day I got it filled at Clapp's (and by the way, don't look for results with the dirty fluid extracts of the shops—get the mother tincture from some good homeopathic pharmacy, or Lloyd's), and I went to work in earnest; but I had got a dose. For nearly two weeks I spent the days in a dark room, coming out, with the owls, after dark.

The inflammation finally subsided, but the sight of the left eye was well-nigh gone.

I could distinguish between a cat and a cow, but not much more, and any attempt to read or write was of short duration. The *euphrasia* had cleared out the inflammation and pain, but my sight was failing faster than this old man of seventy-three cares to see it go. For as yet I use spectacles only for reading or writing, not needing them as yet for street use.

I had to hunt up something to help out, and I dug out my disreputable scrapbook. There I found *verbena hastata*, or "vervain." This herb is said by old mystics to confer on one the power of "seeing through things." Again I opened Culpeper. After a long list of virtues which he attributes to this herb, he says, "the distilled water of the herb when it is in full strength, dropped into the eyes, cleanses them from films, clouds or mists that darken the sight, and wonderfully strengthens the optic nerve."

Here, then, was the needed synergist. I got the vervain at Clapp's and mixed it with *euphrasia*, equal parts, adding to the mixture an equal quantity of water. The improvement was marked the next day, and at this writing my sight is really getting better than before my accident.

I suppose some might ask, Why go back to the past for remedies? Because I believe them—some of them, at any rate—far superior to anything of the present day. I doubt if there is the equal today, in our armamentum, of Lloyd's "glyconda," which is a scientific evolution from Beach's neutralizing powder for infantile bowel disturbances. I generally prepare it with Abbott's calomel with aromatics, for I am a pretty solid alkaloidist, spite of my admiration for men like John Uri Lloyd. Even his massive personality does not obliterate the "family" of Ravenswood. I don't let the bigness of any man eclipse the largeness of another. Orion is a beautiful constellation, but I can turn my telescope on Scorpio or Sogittarius with equal delight.

The fact that remedies were employed years ago and have been forgotten does not detract from their value. "The Lord created medicines out of the earth" ages ago, and a study of Chapter 38 of the Apocryphal book, Ecclesiasticus, will teach us something.

This chapter, or the first twenty-three verses, was read at the funeral of a respected physician by the officiant some two years ago. He did not say from what he was reading, only that it was a very ancient book, and the large attendance of doctors were puzzled, and many of them went scurrying around to find out what it was. My friend, Dr. W., was calling on me one day, and told me of it, and expressed a strong desire to know what it was. I took down my Apocrypha, and showed him the chapter which to his delight he found was the very lesson he was after. It has a good word for Emmanuelism too, but nothing, that I can see, for Eddyism.

Well, I have given you a rambling letter, but you asked me for it, and as a warrant for "listening back" I give you a verse that Father Epstein will translate for you.

"And thine ears shall hear a word from behind thee saying: 'This (is) the way, go in it, for if you be of the right or if you be to the left.'" [Translated by Dr. Epstein.]

JAS. R. PHELPS.

Dorchester, Mass.

[Dr. Phelps' interesting story of his "eye experience" takes us back hundreds of years, reminding us of the strange old doctrine of "signatures," which during the middle ages made a profound impression upon medical practice, one that persists down to modern times. This doctrine, if I may state it crudely, was, that as man, the microcosm, is the image of God, the macrocosm, so he has his images in miniature in nature, and these images were put there for a purpose, to cater to his welfare, even as mankind exists for the glorification of God. And with this thought our ancestors were constantly looking for these strange resemblances, signs, "signatures," in the plants, and when they were found the resemblance suggested a purpose. For instance, blood-root was a blood remedy, because its juice was red, the color of blood; hepatica, or liver-wort, was useful in liver troubles, because of a fancied resemblance to the great depurating organ of the body. Hundreds of plants still carry these suggestive names, and doubtless still are used in medicine because of the unrecognized survival of the old "doc-

trine." One of the most interesting was the mandragora, the "mandrake," which had wonderful repute, because of a likeness to the genitals at the bifurcating root. We all know that ginseng, the favorite drug of the Chinese, enjoys its celebrity for a somewhat similar reason. The writer proposes to take up this subject and make it the title of a special paper, to be published before many months in CLINICAL MEDICINE.—ED.]

TWELVE CASES OF VERSION OR TURNING

In an obstetric experience of fourteen years and taking in about 300 cases I have had occasion to practise version on account of transverse presentations twelve times. In ten of these cases I have done internal or podalic version by bringing down a foot. In two cases, where the waters had not drained off, I was able to turn the child by external version alone.

In my first case I was called to a woman who had been many hours in labor, the waters had long been drained off and the uterus was firmly contracted around the child, which had evidently been dead some time. I was obliged to call in another doctor to assist me and by our combined efforts we succeeded in turning and delivering the child. The mother made a good recovery after having a sharp attack of peritonitis, probably caused by traumatism.

The next case was almost identically similar, but I did not call an assistant this time. I worked from 1 p. m. till 6 p. m.—worked until I had not a dry thread on my body, but I turned that child myself and delivered it without injury to the mother. The child was dead, of course, but the mother made an excellent recovery and did not develop any complication of any kind. I am happy to say that I have never had another case as hard as this one.

In three instances I had to turn the latest-born child of a pair of twins. It has seemed to me that the youngsters tumbled out of their proper positions through having too much room in the womb after their mates were born.

I had always considered external version performed without assistance as next to im-

possible, but by experience in two cases I find that if the child is small and the bag of waters large it is entirely practicable. In cases where a midwife is confronted with a transverse presentation she is very likely to try to deliver by pulling on the arm, which is the reason Emperor William of Germany has to carry a paralyzed left arm through life.

WM. M. GREGORY.

Berea, O.

UTERINE HEMORRHAGE

I am interested always in what you say and do for the reason that you are a firm believer in the power there is in sane medication. About forty years ago I had a case of hydrocele that recurred again and again after washing out with injections of tincture of iodine; it set me thinking. So I determined to use tincture of iron safely diluted. It worked admirably and since then I have never had to repeat the treatment in a single case.

Recently I had a case of continuous hemorrhage of the womb; it had baffled treatment for about two months, curetting by one of our best surgeons included. I took 2 drams of tincture of iron, used a small long-nozzled H. R. syringe, small olive tip at end, bent the end into a gentle curve over a spirit lamp, pushed the nozzle up into the womb as far as I could without using force, having previously charged the syringe with the tincture, then slowly forced the iron into the cavity and withdrew the syringe. She had some pain, so I gave 1-4 grain morphine next day. She discharged some granular coagulated blood, the following day shreds of mucous membrane and a brown fluid still granular, and within a week she was up and doing her usual duties in her home. She is now menstruating regularly and has had no return of her old trouble.

We who solve abstruse problems in our profession either think for ourselves and the profession at large or we leave them groping in the dark. I have now used the tincture of iron in about twenty cases of the class above described and it has never failed in my hands. This treatment seems to be sure, safe and sane. A leading surgeon in

this city told this woman, whose case I have just described, that only removal of the organs would save her life.

S. E. McCULLY.

Dallas, Tex.

[The doctor is certainly right as to the immense value of iron in these hemorrhages. We are too prone to forget what good things we have in some of these old remedies.—ED.]

LUETIC FETUS WANTED

The undersigned is very anxious to secure an undoubtedly luetic fetus, for use in connection with work on the Wassermann test. If any reader of CLINICAL MEDICINE can supply one he will place us under many obligations. Wrap the fetus in moist bichloride gauze, enclose in ten or more sheets of paper, pack snugly in a box and send by express. We shall of course pay charges, beside being glad to return the favor. Address,

DR. J. F. BIEHN,

Biological Laboratory

The Abbott Alkaloidal Company

Ravenswood, Chicago, Illinois.

SUPERNUMERARY FINGER, AND SMALL-POX THAT WASN'T

I have been a country practitioner of medicine for eighteen years, and for the most part have kept my experiences to myself, but there have been a few that may prove of interest to your circle of readers, even though coming from "back in the sticks."

On July 15 I attended Mrs. Y., age 33, in her second confinement. Nothing of special interest developed till after the delivery of a seven-pound girl, when I discovered that there was still another one. While awaiting the arrival of the twin I discovered a peculiarity in the hands of the first-born. On the outer aspect of each little finger there was a supernumerary digit attached to the finger just about the outer third of the first phalanx, by a very small pedicle, which seemed to contain only skin and a shred of connective tissue. The supernumerary digit on the left hand seemed to be a well-formed last phalanx, with bone

and nail complete, while on the right it was smaller and only showed a very poorly formed nail.

In twenty-five minutes the second child was born, also a girl, weighing six and one-half pounds. This one, too, possessed the same peculiarity of the fingers, only that both were large and well formed, the same as the one on the left hand of the first child.

I snipped off these appendages with scissors, which merely caused a slight cry, while the bleeding was very easily controlled. I had no trouble to gain the parent's consent to preserve them in alcohol. The placenta was large, single, with two cords and amniotic sacs, each requiring to be ruptured.

Now, of further interest are the facts that the mother has the marks where exactly similar appendages had been crudely removed by ligation, leaving the stumps of the pedicles, while her other child, a boy of nineteen months, was said also to have had such an adventitious organ on the little toe of one foot. The mother's case was credited to have been a "mark," there having been just one fine plum on a certain young tree which her mother was watching eagerly till it should be ripe, when a neighbor's small boy appropriated it to private purposes.

These are the facts as I have found them, and I offer no explanation. If anyone would care to see the specimens I shall take pleasure in exhibiting them to any who may call.

On March 17 I attended Mrs. B., a multipara, in confinement. The pains were rather inadequate, but labor progressed fairly to the completion of the first stage, when it seemed impossible to get further progress. The head was large, round, and unyielding as a croquet ball, so I applied the forceps and with considerable effort delivered a nine-pound boy who had a head as solid and bony as an ordinary two-year-old child. He was lusty and vigorous and has remained so. These, I suppose, are enough on this line, but I have one more rather peculiar experience to recite.

I had quite a number of cases which I pronounce varicella, or, to the people, chicken-pox. Before very long I began to hear of several cases of smallpox in the

practice of a neighboring physician. Naturally I thought that probably they were the real thing, until one day, without invitation either from the family or from me, he dropped in on one of my families where a young lady had an ordinary case of chicken-pox, insisted on quarantine restrictions and the vaccination of others of the family as well as of the near neighbors. He vaccinated sixteen persons within a quarter of a mile of where the sick girl lived, and one "took." This put me to thinking.

I announced that I was very sure there had been no smallpox in the immediate neighborhood, and that I seriously doubted the other reported cases. Later I accompanied the doctor to see one of his cases and found just what I expected, a young man pretty well covered with small blisters forming on very superficial hard bases that had arisen within the last few hours. The blisters were so delicate that a touch of the finger was sufficient to rupture them, and the contents were clear and watery. The whole eruption ran its course in from six to nine days. As a further test I vaccinated the young lady mentioned above, getting as fair a vesicle as I ever saw, which ran its course in perfect order, and she is just about "well" now. I have offered to vaccinate any or all the patients, but so far no others have accepted.

My excuse for reporting this is to show what one will meet now and then, and also I should be glad to hear what the editors and readers think of such "smallpox."

W. J. KING.

Cecil, Ark.

DIAGNOSTIC AND THERAPEUTIC HELPS

Use pilocarpine in scarlatina. It eliminates toxins and increases phagocytosis.

Nuclein is good in scarlatina. It increases the number and activity of the phagocytes.

In dysentery give emetine, 1 grain, in the evening while the patient lies quietly in the bed.

In acute alcoholism 1 grain of emetine is good. The patient must lie quietly in bed.

If you cannot find any other cause for dyspepsia, think of gallstone.

Abortion is most severe from the ninth to twentieth week, owing to the difficult separation of the placenta.

For rhus poisoning try an application of quinine in water, 1 teaspoonful in 3 ounces.

In sciatica apply tincture of iodine along the course of the nerve, and keep the bowels clean.

GUSTAF F. HEINEN.

Blossburg, Pa.

DIPLOCOCCUS IN THE KIDNEYS

I have recently found the second case of this kind. The first was that of a young lady in my home. She was taken with severe pain in the lumbar region, same fever, etc. A physician with whom I was intimate, being a near neighbor, was called in to see her. His diagnosis was lumbar rheumatism. I was not satisfied with the diagnosis and took some urine to the laboratory for examination and a large number of diplococci pneumonike were found. A treatment with 20 tablets a day of creosote, with other remedies as indicated, among which was arbutin, cured the case in three or four days. A second attack, much lighter than the first, promptly yielded to the same treatment.

A little more than two months ago a man, whom we will call Mr. D., doing business in Chicago, was stricken with paralysis of the right side and left vocal cords and was taken to a hospital. Here an examination showed that he was what the physicians there, and the one here to whom the case was referred on his removal here, called the last stages of Bright's disease, and the paralysis was supposed to be uremic. In a couple of weeks he rallied so that he was brought here, where his wife and children were living. I was asked to make from one to two analyses of the urine per week.

After Mr. D. had been here a few days he had another shock or stroke, after which he was scarcely conscious, if at all, of anything around him and knew no one. The next day, Saturday, urine was brought me that looked more like milk than urine, being loaded with pus, albumin and sugar.

A slide of this showed large numbers of diplococcus. I told the man's brother-in-law, who was helping to care for him, that

if he desired I would let him have creosote and arbutin, and so these were given. On Tuesday another sample of urine was brought which was free from pus, almost free from albumin, with but little sugar, and elimination nearly standard. In a little more than a week the man had another stroke of paralysis from which he died. The day before his death the urine was almost normal, his mind cleared so that he knew anyone he had known before and he was able to sit up nearly all day. I might add that after the clearing of the urine after the second stroke triple arsenates with nuclein were added to the creosote and arbutin.

G. H. FRENCH.

Carbondale, Ill.

ITCHINESS OF SKIN IN SMALLPOX

About eighty years ago an English physician, on the Chinese coast, treated a native patient suffering from cystitis plus an intolerable itchiness of the skin, when salol, 10 grains thrice daily, relieved both conditions. Soon afterward he had a smallpox patient whose chief distress was intense itching of the skin. He gave him salol in 10-grain doses, when, to his great surprise, not only was the skin irritation relieved but the attack of smallpox itself cut short.

To make sure of this fact, treatment in the next three cases of smallpox was limited to salol, 10 grains three times a day, the disease being cut short in every instance, papules not maturing as pustules and those further advanced drying up.

This remedy might be tried in any case of variola, to control symptoms, of course guarding against phenol poisoning.

Personally I believe every acute disease affecting mankind can be aborted if recognized early and the proper remedy is employed.

A. S. THOMPSON.

Richmond Hill, Ont., Can.

[Equally wonderful results in smallpox are obtained with calcium sulphide, if given to saturation. Sometime I hope we may be able to abort all the acute diseases; we are on the way, though the time is not yet. —ED.]



CLINICAL · MEDICINE POST-GRADUATE SCHOOL OF THERAPEUTICS

George F. Butler, M. D., Director
Thomas J. Mays, M. D.
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C. E. de M. Sajous, M. D.
William F. Waugh, A. M., M. D.
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PART III—LESSON NINETEEN

THE TREATMENT OF GOUT

GOUT: A PRELIMINARY DISCUSSION

This is one of the oldest known diseases. It was very completely and graphically described by Hippocrates, and since his day practically every medical journal at various times has contained articles advancing theories as to its etiology, pathology, and so forth. While we know that it is a metabolic disease, its exact cause is as yet unknown.

Character.—Gout is characterized by uratic deposits and inflammation of the joints. Most observers tend somewhat to the belief that it is due to uric acid being retained in the system, caused by renal insufficiency. There is usually a hereditary predisposition; at least this is true in 60 per cent of the cases. It is transmitted by the father and usually to the younger and not the earlier children of the family.

Etiology.—Lack of exercise, overeating, a meat diet, alcoholism and lead poisoning are apparently causative factors. It is found more frequently in men, and 38 per cent of the cases occur between thirty and forty years of age, 60 percent between thirty and fifty years of age. This disease is not very frequent in the United States; not nearly as frequent as in England and Germany and other countries where heavy ales and beers are consumed in large quantities.

The amount of uric acid in the blood is too slight to account for the sclerosis and other changes that occur in all organs. These are probably due to other agents. It may be that the purin bases, the precursors of uric acid, are responsible for more harm than uric acid itself. The probabilities are, however, that some entirely different product of metabolism than uric acid is responsible for the characteristic changes and symptoms observed in gout.

The gouty deposits consist of nearly pure biurate of sodium or of potassium. Later, as the disease becomes chronic, calcium salts are also deposited. In chronic gout, the excretion of uric acid on a definite diet is the same as in normal individuals. We know that for two or three days previous to the attack the uric-acid elimination is below normal, and this has led many to believe that uric acid was retained and deposited. During the acute attack, uric acid is increased in the blood but not nearly as much as in other diseases, such as leukemia. Therefore we can hardly consider it as the determining factor.

As before stated, the excretion of uric acid before the acute attack is below normal. It is greatly increased during the attack, and after the attack it again falls below normal. Some observers have claimed that the de-

creased excretion of uric acid in gout is due to the almost always concomitant chronic interstitial nephritis. This is the explanation for the frequent occurrence of gout in lead poisoning, being the result of a nephritis caused by the lead.

Symptoms in Acute Gout.—Prodromes are only irregularly recorded; they practically always are present, but are so vague as to usually escape the patient's notice. Among these we have particularly digestive disorders, cerebral congestion, vertigo, muscular pains, and in the majority of cases a highly colored urine.

The paroxysm of acute gout is characteristic. Usually the patient is awakened in the early hours of the morning with an acute agonizing pain in the metatarsophalangeal joint of the large toe. This is true of 95 percent of the cases. The pain is described as crushing, or like burning with a red-hot iron.

Upon inspection we find the skin over the locality tense, red, hot, very soon becoming edematous. It is highly sensitive to the touch. Later the pain abates, but the inflammation increases. This syndrome is repeated usually each morning for six or seven days, then the symptoms gradually subside. The severer the paroxysm, the shorter will be the attack. Occasionally the thumb, or the knee, or other joints may be affected, but as a rule it is the metatarsophalangeal joint of the great toe.

Convalescence occurs gradually and is usually complete in from ten to fourteen days.

Pathology.—There occurs primarily an inflammation. This is soon followed by necrosis and then a deposit of biurate of sodium and sodium phosphate. These are precipitated by the sodium bicarbonate in the blood.

It has been found by experiment that 0.004 Gram sodium biurate if injected into the joint will produce an inflammation. There is usually no deposit, however, following the experimental injection.

The temperature in acute gout averages from 100° to 101° F.—rarely 102° F. or above. The pulse is slow and hard, averaging 100. There is practically always a furred tongue. Anorexia, nausea and vomit-

ing are very common. The disease is more common during spring and fall or severe weather changes. The urine is very dark, decreased in volume, with increased specific gravity. The acidity is also very high. The uric-acid elimination is decreased or below normal preceding the attack, very much increased during the attack, and below normal immediately following the attack. This is also true of phosphoric acid, both being derived from the disintegration of nuclein. The uric acid is deposited in the joints as sodium biurate. The urea percentage and excretion is practically normal.

Albumin is nearly always present in small amounts. Oxaluria is a very frequent finding and often results in the formation of calculi. Sugar may be found intermittently—a so-called "gouty diabetes." Microscopically, we find hyaline and granular casts, blood and many renal cells, indicating an active hyperemia of the kidneys.

Blood tests show the red cells and hemoglobin but little affected during the acute attack, although in the chronic form of the disease we have a marked secondary anemia, showing a considerable decrease in the number of red cells and a slightly greater decrease in the amount of hemoglobin. The blood, however, will show us a marked leukocytosis, particularly of the neutrophilic type, so that we have a neutrophilia—an increase of the neutrophiles over and above 60 percent of all of the leukocytes. In acute gout this is usually very high, the leukocytosis averaging 20,000 or more.

In chronic gout, we also have a marked leukocytosis with a neutrophilia. This serves as, and often is, the principal distinguishing point between chronic gout and rheumatism, in which latter there is not such a marked leukocytosis.

Uric acid can be demonstrated in the blood. To one or two drams of blood serum (or a smaller amount may be used) we add 10 drops of 30-percent acetic acid. Inside of twenty-four hours we have uric-acid crystals formed. They will crystallize on a thread if it be suspended in the mixture.

Chronic Gout.—This usually follows a number of acute attacks. There is less pain, less fever, less redness and less swelling, but

the deposits show a marked increase, and are permanent. They affect principally the feet and hands; occasionally the thumb, knee or elbow, sometimes also the spine; rarely the shoulder or hip. The deposits are principally in the cartilage, but occur also in the capsule and ligaments. Deformities result, such as ankylosis and contractures. Deposits occur in the ear in 25 percent of the cases, also in the tendons, skin, eyelids, nose, pharynx, penis, and scrotum.

In chronic gout we always have a concomitant chronic interstitial nephritis, in which we have a marked increase in the amount of urine of a low specific gravity and a very light color. The acidity also tends to be lower. Urea is markedly decreased. There is usually, but not always, a trace of albumin. Hyaline casts are constantly found.

Complications.—Renal complications, with albumin, occur in 26 percent of the cases. Chronic interstitial nephritis is practically always present in every chronic case of gout. Deposits of urates in the kidneys and in the pelvis usually occur. These result in hematuria, oxaluria, pyelitis and cystitis as complications. Arteriosclerosis is always present, indicated by headache and vertigo. Myocarditis, angina pectoris and atheroma of the valves are often present. Pulmonary stasis, bronchitis, and asthma are the usual pulmonary complications. Very frequently a retinitis is noticed. Neuritis, lumbago, sciatica and eczema usually follow as a result of the disturbed metabolism.

Prognosis.—The patients usually live for years. Death is due (unless to some intercurrent disease or complication) to uremia, apoplexy or pneumonia, in the order mentioned.

J. F. BIEHN.

Chicago, Ill.

THE TREATMENT OF GOUT

The proper treatment of gout will depend largely upon the kind and nature of the local manifestations, and the age, habits, temperament and antecedents of the patient. I can do no better than quote largely from a paper of mine on this subject recently sent for publication to *Merck's Archives*.

Two principal lines of treatment are to be instituted, one a general, or what might be termed prophylactic, treatment, directed to the gouty predisposition, and another, intended to relieve the acute attack, or gouty paroxysm.

The Gouty Paroxysm.—Attention will first be directed to the treatment of the gouty paroxysms, which should be conducted in the main on the same lines as those of infectious, toxic or inflammatory ailments.

At the outset of the attack the bowels should be thoroughly evacuated by means of calomel and podophyllin, followed by a saline laxative, the idea being to remove the toxins present in the alimentary canal, and, so far as possible, to prevent their formation, thus minimizing the retrograde metamorphosis of the body nucleins.

Intestinal and Systemic Elimination must be promoted, not only through the bowels, but by the way of the kidneys and skin. After first thoroughly emptying the bowels, repeated purgation is undesirable, it being of more service to encourage the action of the skin and kidneys than to induce watery intestinal discharges.

If there is much fever, the patient should be confined to bed, and the inflamed joints kept at rest; but this injunction is hardly necessary, for in the majority of acute attacks of gout, the patient of his own initiative will seek the bed, placing his afflicted foot in the most comfortable position possible.

Local Treatment.—The painful joint can usually be somewhat relieved by gently rubbing it with some anodyne liniment, or applying some mentholated salve, and then swathing in cotton batting covered with oilsilk. This appliance acts as a light poultice and promotes local sweating and also a timely development of the tumefaction, which usually is followed by great relief. The application of cold to the inflamed joints must be strongly deprecated, as it tends to metastasis of the morbid process to the external organs.

The Febrile Stage.—During the febrile period, and particularly in sthenic cases, the volume of urine should be increased and the degree of urinary acidity lowered—even to the point of rendering the urine neutral or alkaline—by the free administration of

potassium bicarbonate or citrate or by some other alkaline mixture. However, sodium salts are objectionable for certain chemical reasons and should be avoided. No saline aperient containing any considerable amount of a sodium salt should be given.

A granular effervescent magnesium sulphate (which may well be combined with lithium carbonate and colchicine) is an ideal combination for gout and the so-called gouty and rheumatic diathesis. Another excellent combination is that of calcium carbonate, lithium carbonate and colchicine.

Laxative alkaline diuretics of this sort will not only promote diuresis, but will render the urine neutral or alkaline, will lessen the viscosity of the blood, and at least temporarily increase the excretion of purin nitrogen, all of which are very desirable effects to produce in the treatment of gout.

To Combat Inflammation.—For the purpose of controlling the gouty inflammation and shortening the attack, there is no combination of remedies comparable to colchicine, laxatives (preferably the laxative salines) and intestinal antiseptics.

Hutchinson places *alkaline saline* laxatives in the first place, of which he says:

"The old reliable remedies in gout, in which great group the alkaline laxatives are most important, have won their laurels and enormously relieve the situation by checking the acid processes of fermentation in the alimentary canal and sweeping the putrescent matters out of the system before they have time to give off their toxicant products to the blood. In short, almost every remedy which chemical experience has proved to be of value in gout and the gouty state will be found to prevent the fermentation or absorption of the intestinal toxins or to promote their elimination from the system."

The sodium salts, as referred to above, should not be used.

Colchicine as a Specific.—Colchicine seems to have a specific influence in gout, the striking effect of this remedy in reducing gouty inflammation and lessening the pain often being remarkable.

Some persons have a marked susceptibility to colchicine, experiencing a sense of faintness unless the dose be very small. In other

persons, ordinary doses induce purging, and here the dose must be reduced accordingly.

Apparently, small doses of colchicine increase the amount of urine, urea and uric acid excreted; while large medicinal doses cause vomiting and diarrhea, due to the excretion of the drug through the mucous-membrane lining back into the stomach and bowels.

As lithemia, with its multifarious manifestations, is invariably present in persons suffering from gout, colchicine is of peculiar value, and no agent is more generally useful in these conditions than the saline combination mentioned.

"The great objection to colchicine is its remarkable efficiency," says Dr. Waugh. "The melancholy, dulness, sluggishness, anorexia, bad breath, and 'tired feeling' are so promptly dissipated by a few granules of colchicine that the patient, perhaps unconsciously, increases his consumption of meat and relaxes his exercise, relying on the daily dose of colchicine to keep him comfortable. It would be far better to forego the aid of all drugs, and let nature punish the slothful glutton until he is driven back to hygienic living."

Objections to Colchicine Ungrounded.

—Fear has been expressed that, although the immediate action of colchicine be favorable, the more remote effects are not salutary and that the use of the drug tends to increase the frequency of the recurrence of the paroxysms. These apprehensions do not, however, appear to rest on any solid ground of facts.

One should know, of course, how to use colchicine. This alkaloid is much more rapidly absorbed than are the galenic preparations of colchicum; nevertheless, the slowness of its action renders this agent ill fitted for rapid, cumulative administration, so that the doses should be not less than two hours apart.

As a rule, the drug exhibits a more pronounced action on persons who eat much nitrogenous food. I rarely find it advisable to give more than 0.0005 Gram (gr. 1-134) four times a day, and even this may be too much for persons with delicate stomachs. In acute gout or in the cerebral congestions of plethoric persons, where a strong and

speedy effect is required, a much larger dose may be given, in some cases even as much as 0.061 Gram (gr. 1-97), given dissolved in hot water and repeated in two hours.

Dietary Rules.—During the inflammatory period no meat should be eaten; the use of meat unquestionably proloags the attack. Adequate nourishment of a less stimulating character can be supplied by means of milk, bread, farinaceous puddings, and a little fish. Alcoholic beverages, except under special circumstances, should be withheld during the febrile period. In weak or elderly persons whose systems have been permanently lowered by repeated attacks, the diet should not be unduly meager, and nourishing soups, white meat and a modicum of alcoholic stimulants should be allowed.

The Systemic Treatment.—The fundamental aim of a rational treatment of chronic gout must always be to diminish the incident of the diathesis on the constitution.

In the gouty diathesis there is a tendency to accumulation of water in the body fluids, as also to the precipitation in the tissues, as crystals, of sodium biurate.

The amount of urates in the bodily fluids can be diminished by lessening the amount of proteid substance ingested. It is well known that a vegetable diet is less productive of uric acid than an animal diet.

In choosing a diet for a gouty patient, however, regard must be had, of course, to the whole condition, and especially to the peculiarities of the individual. In the treatment of gout, as in the treatment of any other disease, it is necessary to consider the man as well as the ailment, and in gout, especially, it is often of more consequence to treat the man than the ailment. As a rule, gouty people should be advised to partake cautiously of meat, fowl, game, and cheese, and to eat as freely as their digestion will permit of bread, rice, garden vegetables, salads and fruits.

The advantage to be gained from an adjustment of the dietary on these lines may be inconsiderable or even inappreciable in cases of inveterate gout, but it may be of critical moment in slighter ones. A diminution of one or two grains a day in the amount of urate thrown into the circulation may make

all the difference between the occurrence or nonoccurrence of an arthritic attack.

Aliments to be Avoided.—Gouty persons should not use alcoholic stimulants. This rule will hold good in the great majority of cases. There are gouty patients, however, who seem to do better when allowed a moderate amount of alcoholic beverages.

Distilled spirits have but little influence in promoting gout, and whisky and gin less than brandy. On the other hand, the richer wines, beer, and strong ales are highly provocative of gouty manifestations.

Common salt should be partaken of sparingly, for, like other sodium salts, it promotes the precipitation in the tissues of sodium biurate. Potassium chloride may be substituted for the sodium chloride, resembling it in flavor, and being not only harmless but acting beneficially on the gouty system.

In this country, at any rate, all gouty persons suffer from uricacidemia, and for that reason alkalis, particularly the alkali carbonates, are necessary to overcome this condition. Other drugs sometimes found to be beneficial in chronic gout are the salicylates, potassium iodide, and piperazin.

Mineral Springs.—Gouty patients who can afford the time and expense should spend a few weeks each year at some mineral springs, the waters of which are free from sodium salts, a visit to a resort where the right kind of mineral water is available usually proving of much benefit. At a watering place a visitor has nothing else to do but to attend to his cure; his mind is diverted from himself and the worries of his daily life; he has all the advantages of proper hydrotherapeutic treatment, electric baths, massage, exercise, and, what is more, he will drink more water at such a place than he will at home.

Other Measures.—Gouty persons should lead an active, outdoor life, and should, so far as practicable, avoid heavy dinners and late hours. They should cultivate a habit of cheerfulness, and avoid as far as possible worrying and undue mental and bodily fatigue.

Chronic gouty joints may be relieved by massaging with some stimulating or anodyne liniment, painting with tincture of iodine or soaking the affected extremity in a hot

solution of potassium carbonate or lithium carbonate.

Persons of the gouty diathesis are liable to be troubled with affections of the skin, which in many cases seems to operate as a sort of safety-valve to the gouty system, so that, unless the itching and irritation actually becomes intolerable, it is not well to interfere too actively with this description of skin affections. Some simple antipruritic dusting powder or ointment applied to the affected cuticle will usually be all that is necessary.

GEORGE F. BUTLER.

Chicago, Ill.

GOUT

Causative Factors.—Sydenham, himself a sufferer from gout for many years, taught the world what it now knows concerning this painful malady: that it is hereditary as to the predisposition to it; that it is generated in the predisposed by a sedentary life with a too large supply of nitrogenous foods; the use of alcohol, especially sweet wines; the *materies morbi* being uric acid; and that colchicum is the most effective remedy for the paroxysms.

To these fundamentals have later been added the recognition of the uric-acid diathesis as the special predisposing condition; the probability that there is here an abnormal state of the cell nucleus, in view of the intimate relation between nucleic acid and uric acid; the relations with rheumatism, lead, influenza, and syphilis; and the extension and elaboration of the fundamentals laid down by the Master of Medicine of the seventeenth century. The recognition of the importance of the renal form is one of the most noted of these.

There is the less difficulty in diagnosing gout in that the victim generally expects it—knowing that he has inherited the tendency and being familiar with the symptoms as shown in his parents. The premonitory symptoms are those of the uric-acid diathesis.

Symptomatology.—The first attack usually commences suddenly, often during sleep, and in the metatarsophalangeal joint of the great toe. The attack is of an acute, non-suppurative inflammation resembling erysip-

elas. The sufferer generally appreciates Franklin's description—as if a drop of molten lead were dropped in between the bone and the periosteum. The sense of compression is marked. Tenderness is excessive until the swelling begins to subside, when there is pitting on pressure. Motion is impossible. The irritability of temper is notable. Fever is, as in rheumatism, more marked the earlier in life the attack occurs, and more in earlier attacks than in the subsequent ones. The acme may be passed in a few days or not for a week or even two. The larger joints may be affected as the case becomes chronic or inveterate. During the attack there is an increase in the production and sometimes in the excretion of uric acid. Each paroxysm is followed by the deposit of acid sodium urate in the form of tophi.

Determining Conditions.—The course varies with the life of the patient, but extreme old age may be attained with annual attacks of the malady in some instances.

Hippocrates observed that women were subject to gout after the cessation of menstruation; but the same habits of excess in alimentation will induce the malady as in men.

Sydenham said: "Moderation must be observed in meat and drink; so that the stomach will receive no more food than it can digest, and no fresh fuel be added to the disease. The other extreme is equally injurious. Abstinence weakens the parts by withholding their due proportion of that aliment which is necessary for supporting their strength and vigor."

Ebstein, whose work I have cited liberally here, says that a vegetarian diet with the necessary amount of vegetable albumen forms the most suitable plan of nutrition. Milk is good; eggs may be used in moderation; white meat is better than dark; alcohol in any form is poisonous to the gouty; abundance of pure or alkaline water is essential. Fruits containing vegetable acids are useful if they are so taken as to agree with the patient.

Management.—Thermal baths are good for those who can not take the needed exercise. The concomitants must be treated, such as syphilis and rheumatism.

Elstein doubts the value of lithium, finding urotropin better, while piperazin is of use especially for the "rheumatic" pains. He adds: "The importance of treating the constipation is not to be underestimated." Sometimes the salicylates relieve pain. Gouty neuralgia demands iron and arsenic.

The specific remedy for gout is *colchicine*. This must be given in increasing doses until it sensibly acts on the stomach and bowels. It is one of the slowest of remedies to act, requiring from six to fourteen hours to manifest its influence. Hence it is not well adapted to the usual alkaloidal cumulative dosing, but should be administered in a single dose at bedtime. Begin with one milligram (1-67 grain) and increase this dose successively by an additional milligram each subsequent evening until nausea and diarrhea are manifested on the following morning. By this time the attack will evidently be under control.

Colchicine, therefore, is the remedy for the paroxysms, but it is effective in all forms of gout. Acting by stimulating the eliminants, it is one of the distinctly safe remedies, carrying itself and the *materies morbi* out of the body. The only harm it can do is that the patient may seek by its aid to dispense with the disagreeable necessity of taking exercise and of restraining his food supply to his actual needs—measures that are, ultimately, the only true or possible cure for the gout. It must be borne in mind that, given to excess, it increases vascular pressure by contracting the coronary arteries. The danger signals are active purgation, weak heart action and perhaps some cardiac irregularity.

Heat in all forms seems beneficial, and the modern methods of applying very high degrees of heat have their earnest advocates.

Sajous favors purgatives, especially mercurials, as enhancing the catabolic activity of the blood, arresting the accumulation of uric acid in the joints, and lessening the work imposed on the kidneys and their congestion. On the same principle he explains the beneficial action of colchicine. Sajous advises to lessen the intake of nucleins by avoiding the organs rich in these, such as the liver, thymus, kidney, and brain.

Beef extracts and the gelatinous extracts of tendons, bones, etc., are rich in nuclealbumins that give rise to purins that irritate the kidneys.

Iodine, thyroid gland in small doses, and oxygen inhalations are useful as stimulating the adrenals.

Strychnine is of real value only in debilitated cases, with pallor, and this applies as well to iron.

The great difficulty in enforcing the vegetarian diet is the settled conviction of the patient that he is being starved. But if he will endure it for a week, with exercise exactly apportioned to his case, the sense of exhilaration following will often suffice to convert him. One of the best forms in which to take the necessary proteid is as clabber or buttermilk—the latter best of all when prepared with the Bulgarian ferment.

W. F. WAUGH.

Chicago, Ill.

COMMENTS ON THE LESSON

We quote briefly from a number of papers received during the last two or three months. We find many practical points in these papers, many of them evidently the result of personal experience in practice.

Rest Cure for Gastric Ulcer.—Dr. H. G. Palmer gives an outline of this method of treatment, as follows: "By the rest-cure treatment of gastric ulcer we mean absolute rest, both for the body and the stomach. The patient should be put to bed and kept there until the local tenderness is relieved and the general condition of the patient improved. Rectal feeding should be used exclusively until the ulcer is healed or nearly so, then a small amount of easily digested and nonirritating food may be administered by the mouth. Rectal feeding should consist of milk and eggs principally, and these seem to act the best of anything in my experience. Nothing should be given internally for a week, then the patient may take albumen water or milk, plain or peptonized. No boiled milk should ever be given; it always disagrees and often causes irritation. Other foods may be gradually added to the diet until a patient is again receiving the full amount required. An

olive-oil sponge bath should be given every day to aid nutrition."

Dr. Palmer has covered the ground well. It might be emphasized that a strictly recumbent position must be insisted upon, and that cold compresses over the abdomen are desirable, such as the Priessnitz bandage. According to Boas, feeding by the mouth may be resumed three days after the last occurrence of hemorrhage, though the physician may better deviate, if at all, on the side of safety. For a week, at least, the food should be exclusively liquid, and always at body temperature. A good meat juice, as bovine or Valentine's beef, may be employed, or albumen water or yolk of egg in emulsion. Milk, all things considered, is the best food.

Good Rectal Enemata.—Here are two suggested by Dr. W. C. Post, whose ideas are always practical: (1) 250 Gm. milk, 2 egg-yelks, teaspoonful of common salt, tablespoonful of wheat starch, and a tablespoonful of claret. This is practically the same as the formula suggested by Boas, who uses aleuronat (gluten) flour instead of the wheat starch. This mixture is of course warmed to body temperature and 5 to 10 drops of tincture opium added before injecting. Another nutrient enemata suggested by Dr. Post contains one ounce egg-albumen, 3 ounces decinormal solution and 2 ounces bovine.

Drugs Useful in Gastric Ulcer.—Dr. Post thinks there are not many. Ergot and its derivatives are strongly recommended during the hemorrhage. "To my mind the hypodermic use of morphine and atropine, especially the latter, is worth much more. The former for pain and pylorospasm is invaluable; the latter by encouraging peripheral vasodilation helps markedly to control bleeding. Ice is recommended over the epigastrium to check hemorrhage. Oil of turpentine and oil of erigeron have been recommended. Bismuth is also used, in large doses, practically as a local application to the ulcer. Silver nitrate and oxide are also recommended, but in my opinion rest of the body and stomach, followed by rectal feeding, then proper diet by mouth, morphine for pain, atropine to stop bleeding, later alkalis if needed for hyperacidity, hot

packs or fomentations over the stomach, regular catharsis by salines, arsenite of copper and hydrastine in proper dosage, and intestinal antiseptics, will offer a good selection."

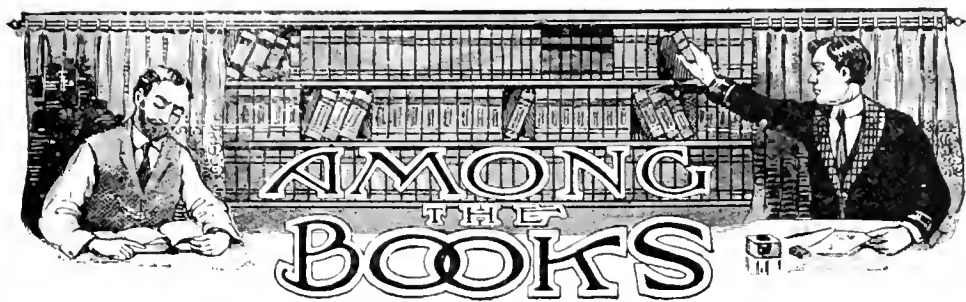
Dr. Post, as usual, has given an exceedingly practical résumé of the therapy of this disease.

It should not be forgotten that gastric ulcer is often a surgical disease, indeed, our surgical colleagues (some of them) incline to the belief that it is always to be treated by excision of the affected area of the stomach. This, however, is altogether too sweeping. Under judicious medical treatment, begun early, the majority of these cases will recover.

Do not forget that a gastric ulcer may be the nidus for carcinoma; despite the textbooks there are cases of gastric cancer in which hydrochloric acid is still secreted. The physician cannot be too careful in making a diagnosis, adding all the laboratory means to the usual physical tests, "to make assurance doubly sure."

EXAMINATION QUESTIONS

1. What are the most important etiological factors in the causation of gout?
2. Give a careful outline of the chemistry of the body during and after an attack of gout.
3. What is names by the term "uricacidemia," so commonly used? What causes this condition, and what is its relation to asthma, eczema, etc., according to recent clinicians?
4. What are the purin bodies, so called, and by what other names are they frequently known? What foods and drinks are rich in products of this class?
5. What are "retrocedent gout," and "irregular gout?" What is the character of the pulse of a "gouty" person—and why has it this character?
6. Outline a method of medicinal treatment for an acute attack of gout.
7. What diet would you prescribe for a person subject to attacks of gout?
8. Describe a case of gout or "goutiness" of the American type, as you understand it, and tell how you would manage such a case?
9. How would you treat a case of interstitial nephritis complicating a case of gout?



SOME POPULAR BOOKS FOR OUR INTELLIGENT PATIENTS

It frequently happens that we desire to give to our patients, or as the case may be, to their parents, a certain amount of information on questions of sanitation, hygiene, prophylaxis and nursing. Also it is a pleasing fact that the public is, today, far more interested in these matters than was the case formerly, and that people desire to know how to preserve their health and how to manage simple affections either in the absence of the physician or until he can be called. Finally, the physician himself may, especially if he is a busy country practitioner, be so absolutely worn out and weary that it is an impossibility for him to read and study, while he would be glad to read some medical literature if it were presented in a simple form.

For all these, and for other contingencies, the popular and semipopular books on medical topics which are being published more and more frequently may be of value, provided they are written by the right men and in the right way.

The Bookworm at this moment has before him a number of such books, which afford a wealth of information presented in a sufficiently simple manner to be intelligible to thinking patients, and yet written so interestingly that even we physicians may well profit from their reading and may use them to refresh our memories or to prepare our talks to patients, nurses, or before public gatherings.

The space at the writer's command is so limited that he cannot discuss all the books of this class which are sent him for review. The books mentioned below will, all of them,

well repay the doctor's reading and are worth being used by him for the information of his clients.

"Children's Diet in Home and School."
By Louise E. Hogan. Revised Edition.
New York: Doubleday, Page & Co. 1910.
Price 75 cents.

This is an excellent little manual for the use of parents, nurses and teachers, giving information on the proper diet for infants and children, from birth up to, and including, the school-age. The various classes of foods and their relative values are well described; the proper diets for summer, winter, in illness, for school luncheons, feeding for feeble as well as for average school-children, all find their meed of attention.

"Confidences. Talks with a Young Girl Concerning Herself." By Edith B. Lowry,
M. D. Chicago: Forbes & Co. 1910.
Price 50 cents.

A simple and charming introduction into the mysteries of life, which should, as a matter of fact, not be mysteries, but should be considered as perfectly natural, as indeed they are. The author leads the girl from an understanding of the reproduction of flowers and birds to an understanding of her own body and its functions. The language is simple and charmingly frank; without any prudishness, but also without any suggestiveness.

Mothers would do well to study and meditate upon this little volume and to let their girl children read it under their guidance. While entirely elementary in its scope, it affords quite enough information to be rather preferable to the majority of the so-called "sex-books."

"Motherhood." A Manual for the Management of Pregnancy. Prepared espe-

cially for mothers, nurses and students of medicine. By Hudson D. Bishop, M. D. Cleveland: Rose Publishing Company, 1910. Price \$1.50 net.

This is a very complete guide for the management of pregnancy and labor, and their complications, and is, perhaps, written rather over the heads of most mothers.

The physiology and pathology of the states of gestation and parturition are excellently described, and if well and carefully studied, the directions are certain to make it possible to meet emergencies until the doctor shall arrive. The hygiene of the expectant and the actual mother, as also of the baby, has also received its proper attention. In short, the book is good. Nor is it in any way intended to replace the physician, but rather has the aim of making his work easier and of diminishing the possibility of danger to his patient.

The dietetic directions are excellent. The advise what to do in labor, until the doctor arrives, in emergencies such as hemorrhage, eclampsia, etc., are valuable not only for the attendants but for the doctor himself. All in all, we cordially recommend the little book to our readers, for the benefit of their nurses and of their patients.

"The Story of the Bacteria; and Their Relations to Health and Disease." *"Dust, and Its Dangers."* These are two books by Dr. T. Mitchell Prudden. Both books are in their second edition. Published at New York by G. P. Putnam's Sons. 1910. Price 75 cents each.

In these two little books the well-known bacteriologist Dr. Mitchell Prudden has told the story of the bacteria in a very attractive and popular manner, and The Bookworm has read them with great interest and enjoyment.

The study of the microscopic forms of plant life is comparatively so recent that there are many physicians living today who might well take up these little volumes as a preliminary to the more detailed and scientific study of more pretentious textbooks. To the layman, they afford a wealth of information on this highly important subject in not only readable form, but so interestingly and beautifully told that he may well be tempted to continue his investigations.

The mere mention of bacteria or micro-organisms has come to be understood by some people as something harmful and undesirable; the author shows that there are "friendly" as well as harmful bacteria and that the former are necessary to the normal process of life. The relative importance of the respective forms of bacterial life are explained, and the action of the pathologic germs is described in sufficient detail to be of value. The volume also contains prophylactic directions and advice, and is not only interesting but very useful.

The other book, that on dust, has been written with the purpose of informing people, in simple language, what the real danger is of acquiring serious disease—especially consumption—by means of dust-laden air, and how this danger may be avoided. It is, as the author says, an unpleasant subject, but one which everyone must know something about. The book fulfills its purpose clearly and well, and will prove of great value for ourselves as well as for our patients.

The reading of these books reminds The Bookworm of something he has wanted to talk about long ago, and which he will just mention here. If "doctors" are to be teachers, and if one of their duties is to prevent disease, and not only to cure it, then they should get next to the people when they are well and should tell them how to keep well. They should organize courses of lectures such as are being held, for instance, under the auspices of the Chicago Medical Society on Saturday evenings in the public library, and should give the people all the information which it is necessary for them to know. In such manner this important function of our profession can be well attended to. If any of our readers desire advice and information on the arrangement of such lecture courses and on the preparation of lectures, The Bookworm will be glad to help them.

"The Cause and Cure of Colds." By William S. Sadler, M. D. Chicago: A. C. McClurg & Co. 1910. Price \$1.00. This is another volume properly belonging in this series of popular books. We quote from the announcement:

"Although colds are so common, their origins, effects, and cure are clouded in

misapprehension. Dr. Sadler clearly distinguishes between the different kinds of colds, shows that in spite of their general name, low temperature is not the agency of their being, describes the courses of the various colds, distinguishes them from grip, and gives most comprehensive directions for their cure and for guarding one's self against them. This little book may be made of inestimable value by all who are willing to follow a physician's sensible advice."

BECK'S "BISMUTH PASTE IN SUPPURATIONS"

Bismuth Paste in Chronic Suppurations. Its Diagnostic Importance and Therapeutic Value. By Emil G. Beck, M. D. St. Louis: C. V. Mosby Company. Illustrated. 8vo. pp. 237. 1910. Price \$2.50.

Although the author's well-known method of treating chronic suppurative conditions with bismuth paste has not yet arrived at a stage of perfection when it might be called a finished method, the book before us describing the subject in its present stage of development will be welcome to many physicians and surgeons who do not have the leisure or facilities for following the periodical literature on the subject which is somewhat widely distributed in the different journals.

Dr. Beck has presented his method in his usual excellent manner, and his book affords a guide for the employment of bismuth paste that must go far, by assisting physicians and surgeons in its use, toward the further development and perfection of this diagnostic and remedial agent which promises so well.

LONGYEAR'S "NEPHROCOLOPTOSIS"

Nephrocoloptosis. By H. W. Longyear. St. Louis: C. V. Mosby Company. 1910. Price \$3.00.

A description of the nephrocolic ligament and its action in the causation of nephroptosis, with the technic of the operation of nephrocolopexy, in which the nephrocolic ligament is utilized to immobilize both kidney and bowel.

This monograph has the advantage of being entirely original and not a compilation

or a historic treatise, presenting, as it does, the author's view on the subject. Dr. Longyear believes that in the nephrocolic ligament he has discovered the principal positive etiologic factor for nephroptosis (floating kidney), and his discussion upon the treatment of this condition is based, naturally, upon this premises.

The book is well printed and illustrated. The text does not only consider the surgical treatment, but also the prophylactic and medical management of the conditions under discussion, so that, while of interest to the surgeon, it is even more so, if possible, to the physician.

SADLER'S "SCIENCE OF LIVING"

The Science of Living. By William T. Sadler, M. D. Publishers, A. G. McClurg & Co., Chicago. Pp. 420. Price \$1.50.

This book is addressed to the layman who values health and who prudently seeks to know how to maintain it; in other words, to the man who believes that prevention is better than a cure. It is the best of its kind we have seen. It sticks to known facts and, we are glad to note, it does not belittle the doctor and his work. Too many writers of late, actuated by sordid motives, have gone out of their way to point out the limitations of the healing art; the effect has been to destroy, in a measure, the influence of the doctor and to lower his standing in many communities.

We find between these covers a mass of information, well classified and indexed, on practically every phase of hygiene. Some subjects usually passed over by writers on health are discussed here. The work is quite free from scientific technicalities and medical terms, as a work of this kind should be. It is common for medical writers, when addressing their patients, to talk "over their heads," with the result that the message they aim to convey is only partly understood. In fact, it is the exceptional writer who can transpose his technical sentences into language comprehensible to the average person.

The author is a well-known practitioner in this city and a lecturer on hygiene. He occupies the chair of physiologic therapeutics in the Chicago Postgraduate College, and

his long and ample experience along this line makes him fit to give sane and accurate council on "the art of keeping well."

Enough of anatomy and physiology is given to make the instructions clear, and the illustrations help out in this and reveal to the reader some of the inwardness of his complex organism. More than a hundred pages are devoted to nutrition. We find "a study of foods" giving the composition, nutritive value, etc., of the common food-stuffs. The chapter treating on "poisoned and adulterated foods" is interesting and timely.

Self-medication is discouraged, while patent medicines are scored in these words: "Under no circumstance allow yourself to take a medicine of whose composition you know nothing. Do not take medicines unless they are prescribed by a competent physician. Have nothing to do with the nostrums of the almanac or the advertised remedies of newspapers and magazines. When in need of medical attention, employ a physician and not a druggist to prescribe for you."

The doctor who has occasion to recommend a book of this kind to an inquiring patient can safely recommend this one. In diffusing knowledge like this the doctor is knowingly curtailing the need for his services, and from a dollars-and-cents standpoint his income, but along this path lies his duty and his greatest usefulness to the world at large. In certain eastern countries it is said the doctor is paid for keeping his people well instead of administering to them when they are sick, and his success is measured by his ability to prevent sickness—perhaps we may work on the same basis in this country of ours in the very, very remote future.

HOMAN'S "AUTOMOBILE INSTRUCTOR"

Self-Propelled Vehicles. A practical treatise on the theory, construction, operation, care and management of all forms of automobiles. By James E. Homan, A. M. New York: Theo. Audel & Co. Seventh edition, revised. 1910. Price \$2.00.

A very useful book for automobile owners, telling, as its name implies, all about self-

propelled vehicles. As the reviewer does not himself understand anything about these mechanical carriages, he begs to be excused from writing a technical review; however, the fact that this book appears in its seventh edition (the fifth was published but one year ago) certainly testifies to its practical value. We wish it as well as our automobiling friends success—provided they "cut out" death-dealing joyrides.

BOOKS ON PERSONAL HYGIENE

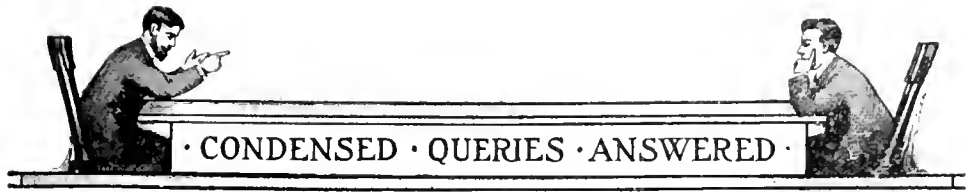
Personal Hygiene and Physical Development. A list of books in the Brooklyn Public Library. Brooklyn, N. Y. 1910.

We have received, through the courtesy of the Brooklyn Public Library, a little pamphlet of twenty-eight pages containing a list of books on the subjects indicated in the title. This list includes many valuable works and will prove of assistance to physicians in making selections of books for their own study as well as for that of their patients. The Brooklyn Public Library, we are informed, will, on application, be glad to send to any of our readers any one volume (at a time) of the books enumerated in the catalog.

IBERSHOFF'S "PHYSIOLOGY AND PATHOLOGY OF THE SEMICIRCULAR CANALS"

Physiology and Pathology of the Semicircular Canals. By Adolph E. Ibershoff, M. D., and a Foreword by Royal S. Copeland, A. M., M. D. New York: Paul B. Hoeber. 1910. Price \$1.00.

This is the first attempt to present in detail the subject treated in this volume to the English-speaking profession. The subject-matter is largely an excerpt of a translation of Dr. Robert Barany's "Physiologie und Pathologie des Bogenang Apparates (Funktionen Pruefung) beim Menschen," elaborated and amplified by notes and addenda gathered at the clinics and lectures of Drs. Rutin, Neumann and Alexander of Vienna. The book is of importance, not only for the eye and ear specialist, but also for the general practitioner.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERIES

QUERY 5086.—“A Stubborn Case of Chorea.” E. E. G., Montana, has a victim of chorea for whom he is desirous to obtain relief and, if possible, a cure. The patient is a well-matured, rosy-cheeked girl of fifteen. She had the first indications of the trouble at the age of 4 years; was a very precocious child at that period, learning and repeating long poems, and doing other “stunts” of like nature. The manifestations at that time were controlled, and did not again appear until at the age of eleven, continuing intermittently after that, but have been continuous for the last eighteen months or longer. She began menstruating when eleven, and the flow has been regular ever since, although rather profuse. Our correspondent writes further:

“I saw the patient the first time two years ago, but only once. Did not see her since then until within the last week. Her mother informs me that a number of physicians have treated her, all giving the old stereotyped remedy—Fowler’s solution. Now she returns to me nearly in despair. I told her that if there was any cure she should have it. Hence, I am writing you for helpful suggestions. I want you to provide the medicine with strict directions for its use. I have used many of the active principles with success, but you know old-school men who entered practice in the ’80’s and earlier are hard to turn from their old theories. However, I am always open to conviction, and if we can cure this girl, you and yours shall have all the credit.”

In reply, we cannot do better than to refer to the treatment outlined in our March number, page 352, in answer to another

correspondent, G. M. S., Query No. 5685. As a matter of course, the girl’s urine should be examined and also the reflexes tested; furthermore, the rectum and genitals must be inspected with especial care. Percuss the spine for tender areas and let us know just what you find. The eyes should be tested for errors of refraction. Absolutely prohibit tea and coffee. Insist upon an epsom-salt sponge-bath (1 ounce to 2 quarts of water) every third night, followed by brisk friction with a rough towel. Limit this young lady’s diet, excluding sweets, pastry, and meats.

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QUERY 5687.—“Worms. Fat Globules in the Feces.”—W. H. R., Ohio, forwarded to our pathologist a vial containing small-sized masses voided with the feces by an elderly lady who says that she “passes hundreds of them.” The doctor writes: “Several weeks ago she passed a worm five or six inches in length, flat, some parts one-fourth inch broad. With a magnifying glass I could trace the alimentary canal. The worm was not jointed. I gave her calomel and santolin, but without result. I then gave her an emulsion of oil of turpentine and olive oil, and she brought me these little things yesterday.”

The pathologist reports that the “small masses” submitted are merely particles of undigested fat. The roundworm, *ascaris lumbricoides*, would not be “flat.” *Oxyuris* could not possibly attain this size. *Tænia saginata*, the common “beef-worm,” is very distinctly jointed, as is also *tænia solium*, the pork-worm. *Tænia nana*, the dwarf tapeworm, is not so distinctly seg-

mented, but it is very small. It is barely possible that the worm passed was a fish-worm, *bothriocephalus latus*, the latter being fairly common.

Under the circumstances we suggest that you give a good preparation of male fern with chloroform and castor oil in the early morning, the patient having fasted since 5 o'clock of the previous evening. Carefully watch the stools, which should be voided into a pail of blood-warm water.

Is your patient at all anemic? As to the fatty stools, it would be well to give pancreatin, and for a time withhold fats. Make a careful physical examination, and advise us further. In this connection we might call attention to the importance of preserving any unusual parasite (in fact any parasite save those of the most common character) passed by patients.

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 QUERY 5688.—“*Borborygmus*.” R. W. C., District of Columbia, presents the following clinical data and asks us to suggest medication:

“R. K., male, aged 21, height 6 feet, weight 166 pounds. Has had the diseases of childhood, from which recovery was good. Has not been attended by physicians for ten years. Is clerk in a department store, while studying at nights. Appetite good; eats regularly, but fast. Bowels regular, two movements. Eats lunch at 12 o'clock, walks fast to school at 5 p. m., and at about 5:30 is troubled with colicky pain and audible noises in bowels, the latter heard several feet away. Eats supper at 7 p. m., and is troubled immediately. This condition is worse on examination at night, and under any mental strain. He is especially fond of bread, potatoes and sweets. The clean-out, clean-up and keep-clean course, also oil of turpentine, *asafetida*, *hyoscyamine*, *atropine*, and other remedies have been tried, but without any decided benefit.”

Loud grumbling and splashing noises (*borborygmus*) are often heard in the intestines of neurotic subjects. Patients with intestinal catarrh also present this symptom. We suggest that you have the abdominal area massaged two or three times a week. Instruct the young man to wear a snugly fitting abdominal belt and to abstain for a

time from starchy foods. The sweets and potatoes must be eliminated from his diet. Give *hydrastin* and *strychnine valerianate* half an hour before food; *papayotin*, charcoal and sodium bicarbonate after meals; nucleinated phosphates (lime, iron and manganese) midway between meals.

Of course, we are prescribing upon a very limited conception of local and general physical conditions, but bitter tonics and digestives are unquestionably indicated, and the atonic condition of the intestines must be overcome.

It might be well to have specimens of the patient's urine and feces examined. See whether the sphincter ani needs dilatation. Is there any evidence of *gastroptosis*?

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 QUERY 5689.—“Quickly Acting Diuretics.” H. E. C., Wisconsin, inquires whether there is anything that will act rapidly and certainly when there is almost an entire stoppage of urine? As to this, diuretics are of various kinds. One extremely and most generally efficacious formula is as follows, for single doses: *Lithium benzoate*, *barosmin*, *arbutin*, *collinsonin*, 1-6 grain of each, and oil of juniper, 1-4 drop.

The condition giving rise to the suppression of urine, however, must always indicate the remedy; drugs which will cause profuse diuresis in one case may fail entirely in another. The physician must ascertain the underlying pathology, whether the disorder is of a renal, vesical or circulatory nature. Total suppression of the urine is a dangerous condition.

Frequently high enemata of decinormal salt solution and the application of hot wet compresses over the kidneys and bladder and the administration of such drugs as *digitalin*, *scillitin*, *barosmin* or *asparagin* exert a marked diuretic effect. *Pilocarpine* is another extraordinarily useful remedy. *Caffeine*, *cubebin*, the nitrates, *lithium salts*, *sparteine*, *strophanthin*, besides many of the essential oils are useful diuretics. Still, as pointed out, the absolutely essential thing is to give the right remedy for the condition present.

Suppose you get clearer ideas of the cause of suppression and in the meantime relieve renal congestion, if it exists, by giving small doses of *atropine* or *hyoscyamine* and then

push digitalin (or scillitin) with asparagin or barosmin, at the same time giving the patient barley water freely, adding one dram of a good preparation of hydrangea to each glass. Don't forget the efficacy of warm saline enemata. Also—under aseptic conditions—catheterize the patient. The bladder may be paralyzed from distension. Occasionally a calculus or polypus acting as a ball-valve occludes the vesical orifice. Diuretics there would merely increase the trouble.

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 QUERY 5690.—“Hawley's Decoction of Carrots.” A. P., Rhode Island, wishes information regarding the nature of Hawley's decoction of *daucus busillus*, and where the same could be procured.

We are entirely unfamiliar with the preparation and do not find it listed. Although trying to familiarize ourselves with all modern remedial agents, we must plead guilty of total ignorance of this article.

The Standard Dispensatory lists an oil of *daucus carota* (carrot seed) and Merrill's “Digest of Materia Medica” mentions a tincture (alcoholic) of the seed of the wild variety of *daucus carota*.

Carrot-seed oil is soluble in alcohol, slightly in hot water. Preparations from carrot seed are supposed to be useful in suppression of urine and painful micturition and as an aromatic stimulant and carminative. The dose of the tincture is from 5 to 20 drops. An infusion of carrot seed would hardly be a “modern medicinal agent,” would it? You are of course familiar with the fact that carrot tea is supposed to have diuretic, diaphoretic and slightly emmenagog properties. Is it not probable that this Hawley preparation is a patent medicine? The “busillus” seems to point in that direction.

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 QUERY 5691.—“Fissure of Tongue.” G. C. H., North Dakota, wishes suggestions as to treatment of a woman aged forty-three, mother of three children, general health in every way good, except for slight digestive trouble at times in the form of fermentation and eructation of gas. She suffers intensely from a fissured tongue. Fissures are numerous, confined to the anterior third of the

dorsum, and radiate from one main large fissure in the median line about 3-16 inch in depth. Fissures began to appear six or eight months ago; have been indolent, and are quite sensitive to food and temperature irritation. The top of the tongue is lightly coated. Inflammatory symptoms absent. A 10-percent solution of silver nitrate, also the pure stick, has been applied to the central large fissure, twice, together with antiseptic mouth-washes. Where the silver was applied, the tongue is clean and has normal color, but otherwise there is no change. Syphilis is excluded.

It must be remembered that fissures of the tongue, when persistent, are usually of luetic origin; however, in some forms of a subacute glossitis the “central groove” which is met with in not a few individuals may become deepened, raw and infected; transverse cracks may also appear. A diagnosis cannot possibly be made from the data given. Send a scraping from the tongue and a 4-ounce specimen of urine from a twenty-four-hour output, stating the total quantity voided.

It is quite possible that the woman is autotoxemic—a result of gastric and intestinal indigestion. The tongue might under such circumstances become inflamed and bacteria would of course immediately invade the papillæ of the dorsum. The central groove would ulcerate first along the edges. Until we know more certainly what you have to deal with, keep the patient's mouth thoroughly clean by the use of a mentholated solution of the sulphocarbolates, and touch the fissures morning, noon and night with a swab soaked in pure hydrogen dioxide solution, then apply borated lanolin. If the condition is due to dyspepsia, that disorder must be corrected.

If a leukoma exists, these steps will prove beneficial and more definite procedures can be instituted later. Send with the scrapings a complete clinical picture. Echinacea and thuja may be applied every few hours with advantage.

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 QUERY 5692.—“Bromidrosis.” E. B. T., Georgia, asks advice as to treatment of a patient with “a very peculiar affection.” She is rather fleshy, and unless she bathes

at least twice daily, winter and summer, the body-odor is "terrible, just as if she had not bathed in a week." The doctor has tried several things without seeing results.

Nine times out of ten, patients so afflicted are autotoxemic. There is fermentation of the contents of the intestines with absorption of the toxic products and elimination of material through the skin, which should be excreted in other ways. Have a specimen of the girl's urine examined. Give her, on general principles, a sulphur-containing laxative, after each meal, and a saline laxative draught every morning, with some good hepatic stimulant every third night. Have her bathe the entire body with a carbolated epsom-salt solution (epsom salt, 1 ounce; carbolic acid, 20 minims; water 2 quarts). Then, to the arm pits, between the toes, and wherever there are creases, apply the following powder: Boric acid, 3 drams; tannin-form, 3 drams; talcum, 3 drams. Or you may use boric acid, 6 drams; salicylic acid, 1 dram; starch and talcum, of each 1 ounce. This may be scented with a little orris root or other perfume.

If this does not suffice and the odorous areas can be located, apply, after washing with the epsom-salt lotion, this solution: Creolin, 1 dram; extract of violets, 4 drams; alcohol, 3 ounces. The axilla may be sponged with this solution morning and night, the powder being used elsewhere and also dusted freely into the stockings. As a matter of fact, however, free elimination is the secret of the cure.

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 QUERY 5693.—"Chronic Arsenical Poisoning." P. M. P., Mexico, is in charge of a hospital where a large number of lead and arsenic poisoning cases are treated. They are not the acute forms usually described in textbooks, but chronic cases. The doctor desires us to outline an effective treatment.

With such a limited idea of the conditions presented in your arsenic poisoning cases we are unable to suggest effective medication. We gather that the patients are working in mines where the ore is arsenical. Chronic arsenic poisoning is a difficult thing to treat. As most of the authorities point out, it is impossible to formulate "set" methods, the peculiar symptoms present in the individual

governing medication. Excessive impregnation of the system with arsenic is first shown, as a rule, by irritation of the stomach as evidenced by anorexia, soreness and sensation of weight at the epigastrium and diarrhea. Nervous symptoms are also prominent, while various forms of paralysis are not uncommon.

Arsenous acid itself does not act upon the sound skin but upon the mucous membrane. Thorough elimination is essential in all cases. Also, it is desirable to form a stable salt of the drug, endeavoring to pass the poison from the system in this form. This is an important subject and should be more thoroughly understood. We invite physicians familiar with this form of arsenic poisoning to report their observations. Any method of treatment which has been found effective should be outlined in detail.

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 QUERY 5694.—"Ammonium Carbonate in Capillary Bronchitis." W. H. C., Tennessee, wonders why we make no extended mention of carbonate of ammonium. The doctor has had considerable experience and found that drug "a life saver in certain cases, particularly in capillary bronchitis."

Ammonium carbonate has been recommended by us from time to time, especially in capillary bronchitis where the child is, so to speak, suffocated in its own secretions. The positive therapist, instituting efficient treatment early, rarely encounters such a serious condition and should be familiar with this remedy.

We recognize in ammonium carbonate an excellent stimulant, one which will sustain the heart and respiration during the course of pneumonia and continued fevers. It is also a very valuable stimulant expectorant of special service in chronic bronchitis and bronchial pneumonia. We prefer to give ammonium carbonate dissolved in fluid extract of glycyrrhiza. It is a drug easily obtainable, but as it is not feasible to present it in tablet or granule form, it is not generally put out in that way. As already pointed out, we believe the dosimetrist has better remedies, or at least is in possession of drugs which, properly used, prevent the appearance of symptoms demanding the use of ammonium carbonate.



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Medical Education

AT the meeting of the Council on Education of the American Medical Association, one of the speakers said that the object of a medical education was to make good practitioners. No more egregious error could be promulgated, or one more disastrous were it to be disseminated. Fortunately the good sense of his hearers prevented any serious harm.

The object of medical education is to prepare candidates to pass examining boards. The object of examining boards is to prevent the candidates passing. Since some must pass, the most advanced and truly scientific boards arrange their examinations so as to exclude every applicant who has any knowledge of the practice of medicine, any special interest in the sufferings of afflicted humanity, or any practical knowledge of the means of curing or relieving the sick. Lest some experienced practitioners should succeed in slipping by, the guardians of the portal in some states effectually prevent such calamities, by excluding from the examinations all except recent graduates.

Sir Victor Horsely has been knighted as a recognition of his eminent services in mapping out the functions of the cerebrum. Huchard was the Nestor of French medicine, full of honors, well-earned. Semmola has rendered Italian medicine illustrious. Ehr-

lich has just electrified the world with his newly-discovered remedy for syphilis. In our own land we cite the names of S. Weir Mitchell, the dean of American internal medicine; Welch of Johns Hopkins; Osler, the pride of two worlds; Murphy the President of the American Medical Association; Billings and Simmons, the Siamese twins of the same great body; Jacobi, of New York; and that galaxy of great surgeons who have made Chicago famous—Ochsner, Ferguson, Bevan, Steele, and many more—yet not one of these would be permitted so much as to present his credentials and qualifications to the examining boards of some states.

In describing Al Sirah, the hairlike bridge over which true Mahometans skate from earth to heaven, across the gulf of Hades, they add that Jews and Christians are not permitted to attempt the passage but go right down by a direct route.

This year's meeting of the Council on Education was not marked by any sensational features. There were evidences of good work done, of a useful bracing up of the slacker colleges, of a general approximation toward a better and more uniform standard.

But the reaction against exaggerated conceptions and impracticable standards was evident. Instead of meek and cowardly acquiescence in unfavorable criticism, there

was a disposition to criticise the critic, and to examine his qualifications for his task and the justness of his strictures.

As an example of the effects of his work last year, we would remark that in our own sovereign state the educational authorities (nowhere more fair than in Illinois) were so moved by the charge of leniency, that they issued orders that all candidates for matriculation in medical colleges who did not present a diploma were to be examined on all the studies of the four-years' high school course! As there is not in existence any man who could pass a real examination of this sort, this meant the exclusion of all the applicants.

Fortunately, so it seems to us, the schools found means to meet the situation, without being compelled to close their doors after seeing their classes flock to the schools of neighboring states where sanity prevailed, for the supply of medical practitioners is not regulated by law or by sentiment, but by the principle of supply and demand, as in all other occupations. Let any one school increase its requirements and the students flock to its competitors. Let all schools in any state raise their demands, and the other states get the classes. Let all the colleges in the land adopt a "high standard," and the country is inundated with irregulars, who skip the long and expensive course of instruction and come in without any preparation for their duties.

Reform by legal enactment, or by patent processes, or by any unnatural scheme or method, is sure to fail, because of some provision of nature unknown or overlooked, that effectually prevents success. Thus, the sportsmen of Scotland sought to increase the supply of game birds by destroying the animals that preyed upon them, but an infectious disease swept the other birds away and left fewer than ever. The foxes and weasels had really caught the sick and weakly and improved the stock. The mongoose exterminated the cane rats of Jamaica, then ate up the snakes, and the island is overrun with ticks and insect pests which had been kept down previously by the snakes.

England sought to purify her people by transporting felons to the antipodes, only

to find that some mysterious and unsuspected law regulated their number, and for every forger, burglar, or footpad transported, another appeared to take his place.

Despite the slaughter of millions of rats, there has been no diminution of their number, since the removal of competition appears to facilitate their breeding.

The standards of medical education can be raised exactly as the general intelligence of the people is so raised that a better-educated doctor will be appreciated. The standard of excellence as a practitioner is not necessarily identical with the standard of education. It is not what a man knows but the use he can make of it, that counts. It is not the sum of one's knowledge but the part he needs to put in practical operation. One may be able to tag every germ that has come down the pike, to recite by rote the rules for every histologic, physiologic, bacteriologic, chemic, and all the other laboratories, that have been devised to fill the medical student's head with stuff he can never use, and yet when he is facing a sick man, what are all these things worth? While he is helplessly searching through a skull full of junk, some less educated personage steps up and with a simple word fills the need.

Education means the preparation of the pupil for his lifework. There is one education best for the laboratory specialist, another for the practitioner of medicine. Let each have the training that will best prepare him for his life-work; and let the license examination be made in accordance.

You are not beaten until you admit defeat. Nail Lawrence's flag to your top-mast: "Don't give up the ship."

THE MICROORGANISM OF POLIOMYELITIS: AN AMERICAN DISCOVERY

The Department of Health of the State of Pennsylvania recently announced the discovery of what is probably the microorganism of acute anterior poliomyelitis. Dr. Dixon and his assistants found, in the blood of acute cases of this disease, an organism differing from any heretofore described. In blood smears fixed in methyl-alcohol for one minute and stained with carbolthionin, the organism appeared as a faintly stained blue

rod, with regular cell wall, about ten microns long and 0.8 micron in width, curved at an angle of 60° to 75° at one end and occasionally at both ends. At times the curved end is bulbous. They may be discerned by a 4mm dry objective, but better by a 1-12 oil immersion. They are found free in the serum and in the body of the red blood corpuscle.

Blood from ten cases of last summer's epidemic, and thirteen cases during the acute stage in monkeys, the malady being produced experimentally, showed these organisms; while that from three normal human beings and thirteen normal monkeys proved negative. After inoculation with the virus these same monkeys gave positive results.

Had this discovery been made in Europe there would already have set in a pilgrimage of scientific men to worship at the new shrine.

DEATH OF DR. JOSEPH CLEMENTS

By the death of Dr. Joseph Clements of Wichita, Kansas, the medical profession has lost one of the profoundest thinkers it has developed in recent years.

Dr. Clements was born in England. During his early manhood he was a minister of the Presbyterian church, coming into the medical profession after twenty years given to that work. For a number of years he practised in Kansas City, but his tastes were literary rather than practical. A year ago he published a small book entitled "The Metaphysics of the Nature and in the Conception of the Soul—Its Habitat." Dr. Clements never could quite understand why this book received as little attention as it did, but the fact was that it was too abstruse even for the well-educated, although it seemed very plain to its writer.

For the last year he had been engaged in preparing another work which would elucidate the former and remove the obscurity. During the last few weeks of his life it was a race with him in the endeavor to complete this work before death took him.

He has for a number of years been affected with angina pectoris, and his observations upon that disease, as manifested in his own person, have won unusual attention. Less

than a week before he died the writer received a letter from Dr. Clements, in which he clearly foretold the approaching end, speaking of it with a calm fortitude which certainly seemed remarkable in one whose waking moments were attended with such agonizing pain.

The notice of this death, which appeared in *The Wichita Eagle*, seems to show that the citizens of that town awoke, after Dr. Clements' death, to the fact that they had numbered among their citizens, unwittingly, a remarkable man.

Dr. Clements is survived by a widow, a daughter and several sons.

For these things tend still upward, progress is
The law of life, man is not Man as yet. . . .
But when lull roused, each giant limb awake,
Each sinew strung, the great heart pulsing fast,
He shall start up and stand on his own earth;
Then shall his long triumphant march begin,
Thence shall his being date—thus wholly roused,
What he achieves shall be set down to him.
Browning, in "Paracelsus."

IS EXCESSIVE CHILDBIRTH A CRIME ? DR. ROBINSON'S GREAT PAPER

Next month we shall publish what is probably the most startling, the most revolutionary paper that has ever appeared in these pages. This is Dr. Wm. J. Robinson's great presidential address, read at the recent meeting of The American Society of Medical Sociology in New York City. Dr. Robinson declares that it is the most important article that he has ever written. Knowing, as we all do, the absolute fearlessness with which the doctor attacks the medical and social problems of the day, this statement is significant, to say the least.

"I have come to the positive conclusion," he says, "that excessive childbirth among the poor is one of the greatest curses that afflict humanity. It is one of the greatest causes of low wages, poverty, ignorance, idleness, sickness, crime and death." Believing this, he comes out with the utmost frankness with a strong argument for the intelligent (not criminal) limitation of population, for the wider instruction of the people, for wiping absurd and cruel laws off the statute books, denouncing the whole "race suicide" argument as a bugaboo.

The New York World, in its report of this address, said that Dr. Robinson "startled the world." This is a startling paper, but it is brave, strong, attention-compelling from the first word to the very last. Whether you agree with him or not (and many of you, most of you, perhaps, will not) you *must* be impressed by this dignified presentation of one of the greatest problems of our century. "Tremendous" is the one adjective that describes it.

There will inevitably be opposition, criticism. We welcome it. We are by no means committed to all of Dr. Robinson's opinions, and we hope that this presentation of his ideas may excite an intelligent, constructive discussion, for the one thing that we desire is to get at the fundamental truths that shall help us, as physicians, to do the right thing for our patients and for humanity.

Don't overlook this paper. Look out for it. Get extra copies. Read it and reread it yourself, and bring it to the attention of your friends. Then answer it—if you can.

How can any man be weak who dares to be at all? Even the tenderest plants force their way up through the hardest earth, and the crevices of rocks; but a man no material power can resist. What a wedge, what a beetle, what a catapult is an earnest man! What can resist him? —Thoreau.

THE COST OF MEDICINE

To the physician who dispenses his own medicines their cost seems no inconsiderable item; in fact, it has been urged by the druggists as one argument in favor of allowing them a monopoly of furnishing drugs, that the physician is thereby relieved of the expense of supplying articles to patients who may or may not pay him for either drugs or attendance. It is well, therefore, for us to comprehend exactly what is involved in the attempt to supply drugs.

When there is a drugstore within convenient reach, it is not wise for the physician to attempt to supply all his drugs, unless the conduct of the pharmacist is such as to render him an unsafe man to be trusted with the physician's reputation, or the lives and health of his patients. The physician's practice and his income are practically at the mercy of the druggist.

We have recently heard with amazement of the great syndicate formed among the druggists, one avowed object of which is to secure the run of the prescriptions delivered at stores operated by stockholders, these prescriptions to be gone over and such as seem best suited to the purpose to be employed in the manufacture of preparations to be sold by the entire body of druggists involved, as patent medicines, without the slightest remuneration to the physician whose brains are thus pirated upon. There is considerable difference between this method and highway robbery, for the latter attacks the strangers, and not those whose ill-placed confidence puts them at the mercy of such depredators.

But if the physician has a pharmacist whom he can trust, he would better leave to the latter the supply of all drugs whose preparation requires the special skill of the pharmacist, which the physician is not supposed to possess. This refers especially to the preparation of mixtures. If the physician *must* use mixtures, they should be properly compounded, agreeable to the sight, and as pleasant to the taste as it is possible to make them.

In the vast majority of cases the skilful physician will employ single remedies for single indications. The labors of the great manufacturing chemists have placed at the physician's disposal an innumerable variety of pills, granules and tablets, containing single remedies or such combinations as are most likely to be required.

The advantages of the physician dispensing this class of preparations are too obvious to require more than enumeration. He can carry an almost unlimited supply with him, one case, containing nearly thirty thousand doses, weighing less than four pounds, and being of a size which will go into the ordinary physician's satchel, or in a rather large overcoat pocket. Surely, with one hundred remedies and the above number of doses, almost any ordinary emergency may be met.

There is this peculiar advantage in the physician handling his remedies, that he acquires a familiarity with them which is of inestimable value. In reality this is the prescribing pharmacist's whole stock in trade, beyond the skill he has acquired as to

the mixing of drugs; yet he values this knowledge which comes from the handling of drugs very highly.

If you get down to the real truth of the matter you will find the druggist possessing an exalted idea of his own skill, not only in compounding but in prescribing medicines, and a correspondingly low estimate of the doctor's knowledge. A valuable prize awaits the doctor who can discover any druggist, who has been for years in the habit of prescribing across the counter, who does not believe himself more fully qualified to do so than any physician for whom he puts up prescriptions. Applications for this prize may be made at this office. It is needless to say that the fullest proof will be required, should such a phenomenon be announced.

Much, very much, is to be gained by the promptness with which our remedies may be set to work. When we are called first to see an invalid, if we have with us our supply of medicines, their administration may be commenced before a messenger could be dispatched to the drugstore. Our grandfathers understood better than we the importance of promptness in dealing with acute febrile maladies. It was their firm belief that their method of treatment was capable of aborting pneumonias in many instances, but they comprehended well that, in order to do this, disease must be taken in the earliest stages, the formative stages, in fact.

Disease has not in any way changed its nature, and if few of us speak of aborting pneumonias now, we must remember that we have dropped from our weak hands the formidable weapons of a previous era, and have not as a body substituted others as effective. With the disuse of the ancient weapons, the old belief has also gone by the board.

Knowing exactly what we are giving our patients, knowing exactly what our medicine will do, giving it promptly, giving exactly the right thing, and not something which may "answer," we have a facility in treating disease which produces corresponding results. It is remarkable to those not familiar with this method, how quickly disease responds to a very little of the right drug, administered at the right time and in the right manner. This makes practice

by the use of definite remedies like pure chemicals, such as the active principles, a matter of precision, and also a matter of very little expense.

An old physician who had used the alkaloids in his practice for twenty years, informed the writer that the cost of his medicines amounted to less than three percent of his fees received. So far as he was concerned, the loss by supplying medicines was far more than made up by utilizing this same supply of medicine as a reason for asking immediate pay, instead of making a charge account. This man kept his business to himself, sharing his professional work with neither patient nor druggist. As a consequence, when the patient recovered the physician received the credit for the cure, not the medicine administered. In his patient's recommendation, it was the physician he commended to his friends and not the medicine. No prescriptions of his turned up in the hands of persons who never paid him for them.

One of the most difficult things to teach a physician is the exceeding unwisdom of telling all he knows. Patients are frequently curious as to the nature of the medicaments that benefit them. The wise physician keeps mum. The foolish one gives away the secret, and in this way squanders the resources which, judiciously managed, would bring him professional and financial success.

No matter how simple a matter appears to the physician, and for that matter even because it is so simple, let him keep his own counsel; for the secret of successful treatment, kept securely locked within his own bosom, is the most powerful lever for bringing him further practice. When the secret has once left his lips, he has lost that element of professional success.

The cost of the active principles is so trifling that most assuredly it should not be taken into account, when compared with the saving of human life and the prompt extinguishing of disease. In the latter respect the alkaloids are very much cheaper than the galenics, because disease is shortened by the prompt and effective treatment only possible with remedies we know all about. Whenever we have to wait to experiment with our

remedies, to find out what they will do and how much of it they will do, we are losing precious time, and the difference between a long drawn-out case and one which is quickly brought to an end is very great indeed.

Curiously enough, we have occasionally had to meet the objection that with the use of the alkaloids patients get well so quickly that there is no opportunity to make a long account. Nothing speaks more strongly as to the lack of business ability on the part of the physician, for surely the man who cannot succeed in showing his patient that it is worth more to him to be quickly cured than to be kept ill a long time, must be deficient not only in business acumen, but in common-sense.

The question comes up seriously, whether a man who is incapable of utilizing so obvious an advantage is really fit to practise medicine. For our own part we have never found this difficulty to stand in the way, but by going frankly to the patient and explaining to him how much better it is worth his while to pay fifty dollars for being cured, so as to return to his business in a few days, rather than pay a less amount for attendance over a prolonged period, we have found most men sensible enough to see wherein their interest lay.

This difficulty inheres to the old, miserable system of charging for each visit. When physicians will learn to estimate their services at what they are worth, instead of by the number of times they call upon the patient, many of the evils that beset the profession will be at an end.

Success is measured by service. Just in the proportion that you can give benefits to others have you a right to expect the rewards.

DOCTOR H. T. RICKETTS

We have received from the Mexican Government a handsome volume dedicated to the memory of Dr. Howard Taylor Ricketts, and a tribute to the great work which he did in our sister republic, while investigating the causes of infectious disease.

It is a pleasure to see how highly Dr. Ricketts' work is appreciated in Mexico; and from this appreciation to realize the high scientific acumen of the medical profession of that republic. In honoring the memory

of Dr. Ricketts our Mexican colleagues have honored themselves, and shown that they are worthy members of that greater Republic which science has formed of its votaries in all parts of the world.

"DOCTOR OF MEDICINE"

The Interstate Medical Journal calls editorial attention to the abuse of the title of "Doctor." It is no longer distinctive of the doctor of medicine, since quacks of every degree claim the use of that honored designation. Our contemporary suggests that we adopt the European method, and write before our names the words "Doctor of Medicine," or the abbreviation, "Dr. Med." This would distinguish the real doctor of medicine from the osteopath, the optician, and the innumerable others, who, although not truly instructed, claim and exercise the right to style themselves "doctors."

The suggestion is a good one, and might be adopted with advantage. The one objection, as suggested by Dr. Ball, is that it looks like aping European customs, and we have already done more of that than is good for us.

Medicine is a battle, in which the victory rests with the wisest.—Burggrave.

WHO STUDIES MEDICINE AND WHY

As you will see, when you read the Miscellaneous Department, this issue, we have been entertaining the medical students of Chicago. When the two last classes, Northwestern and Rush, were here, we took votes to find out from what part of the country these young men came, and what led them to study medicine.

These students came to Chicago from all parts of the world, there being representatives of England, Ireland, Scotland, Germany, Turkey, China, the West Indies, the Philippines, and nearly every state in the Union, yet naturally our schools draw their largest number from the Mississippi valley, the very heart and energy, as it is the great treasure house, of the nation.

The facts elicited of most interest were concerning the occupation of the fathers of these young men. The vote showed that

of more than a hundred present from the Northwestern class, only one was the son of a lawyer. There were no lawyer's sons among the sixty or more Rush students. In each class there were seven or eight sons of clergymen, fifteen or twenty sons of physicians, and scattering scions of men of other occupations; but the farmer boys led all the rest in numbers. In Northwestern there were between thirty and forty of these; in Rush, between twenty and thirty.

So far as we could learn there were no rich men's sons in either class, though there was plenty of evidence that most of the boys came from comfortable homes. About 20 percent were working their way through college, either in whole or in part. All of them were men of good education, practically all having had partial college training, and many being college graduates—degree men.

Now what do all these facts mean? They mean that the learned professions (at least medicine) are recruited from the social strata which *seem*, in the opinion of the "world," to lie just beneath. They are an expression of the fact that the great humanizing and organizing forces which do the work of society emanate from the mass—from the people themselves, rather than from any alleged superior class.

There is an old saying that "from shirt-sleeves to shirtsleeves there are but three generations." It is pretty nearly true. The American pioneer who carves out a home in the wilderness or on the prairie, and acquired a competence for himself and family as the price of incessant warfare with nature; the old-world immigrant, who sought this new world because it meant the opportunity denied him in the fatherland, and beginning in the slums rose to comparative wealth and importance in the business world—these men, *and their wives*, are determined that their children shall be spared the struggles they went through. The man looks with envy upon the doctor, the lawyer, the clergyman, whose lives seem to them easy in comparison with their own; the woman desires the social prestige which these occupations give.

It is exactly the same process of reasoning that leads the doctor to discourage *his* son from studying medicine. One of the in-

centives to effort is that "My boy won't have to work like a dog, as I have had to." With success comes the fascination of wealth, the lure of the great fortune, and he dreams and plans for something of the kind for his son—a step still higher upward, with money, or what it will buy, as the big prize.

But too often the boy has been pampered. He lacks the stimulus of necessity. He has not learned to work. Life has been too easy. With leisure has come the opportunity for a slowing down of effort, for mental and moral laxity, possibly for vice—and so when the crucial test of his character comes, he fails. Back to "shirtsleeves" he goes, and his children begin again the ceaseless climb toward the goal.

The pampered son's misfortune is the farmer boy's opportunity—the long-desired chance for the young man who has had to work with his hands, who is sound of body, keen of intellect, clean in morals.

Thank God that it is so! In spite of the handicaps of wealth and position Nature evens things up pretty well in the long run. Success comes to the "fit." Fitness means readiness, preparation, and that in turn is only gained by incessant labor. "W-o-r-k" always spells success. No pampered weakling can carry off the prize. The farmer boys, the sons of mechanics, and of the foreign immigrants whose children have been brought up in the hard school of industry and economy, who have learned to know the price that must be paid for success, *these are the strong young men*, and let us be glad that they turn as naturally to medicine, knowing its difficulties and responsibilities, as ducks to water.

Young men of this character, if they are "straight" and "keep straight," are morally bound to "make good." The world of opportunity lies open before them and only their own weakness (barring unavoidable misfortune) can keep them from grasping it. They have a real grounding in the science of medicine, which was impossible in the schools of our generation; and we warn our older brethren that they must look to their laurels. But we welcome them, just the same, all of them, into our order. This constant leavening of our professional life with new blood is needed to keep us striving in-

cessantly for greater individual efficiency. Sooner or later they, too, will have to learn the lesson, as we have learned it, let us hope: *Success consists not in knowing, but in doing. He who does most for his patients will win the largest measure of reward.*

"I hope you will be a better boy," said the dominie to the street urchin who had been caught in a wrong act.
 "I fink I will. I'm takin' cod liver oil ever' night."

VARIABILITY OF DIGITALIS

It is a pity that no one in this country has taken the time and trouble to make a systematic and thorough examination of the various galenic preparations of digitalis, somewhat as was done by the Kansas State Board of Health with regard to tincture of aconite. The little that has been accomplished in this direction shows that these preparations are enormously variable, probably even more than aconite, which was shown to be habitually below the official strength, in many cases showing a variability of several hundred percent from the accepted standard.

Some time ago Sharp and Lancaster, whose report appears in a recent number of *The Pharmaceutical Journal and Pharmacist* (London) examined physiologically the digitalis supplied to the public charities. They found that "a certain volume of the tincture which should have stopped the heart of a frog (*Rana temporaria*) of known weight, in four hours at most, had no effect at the end of eleven hours. Another specimen of tincture, said to belong to another batch, was equally ineffective. At the same time two members of the resident staff of the institution, who were unaware of our investigations, made complaint that the tincture of digitalis was worthless, adding that they had prescribed it in 15- to 40-minim doses every four hours, and in some instances 60-minim doses, without any evident therapeutic action being observed."

Sharp and Lancaster give several reasons for the existence of these weak and thoroughly undependable tinctures. First, careless collectors of digitalis often include large numbers of leaves from other plants in their bags. Second, large leaves and faded leaves, both weak in glucosides, may be included,

Third, accidents or carelessness in the process of drying may lead to the breaking up of the glucosides. Fourth, there can not be any doubt that the tinctures are not always prepared with care; the leaves may not be reduced to fine enough a powder, or they may not be completely exhausted. Finally, the authors have observed that the tincture begins to deteriorate at about the thirteenth month, so that in a general way it is not desirable to use the drug after it is a year or more old.

There can be no doubt that the profession is beginning to realize the dangers and uncertainties of galenic practice. Eventually it will turn to the active principles. Admitting the complexity of the chemical problems involved in the separation of the digitalis glucosides, the advantages of using them, and with therapeutic discrimination, are so manifest that physicians are bound to take them up, and that right soon. Definiteness and potency the physician must have, and with no drug are these qualities more essential than with digitalis. The doctor who has had some experience with a good digitalin will not turn again to the tincture or fluid extract.

HOW TRADITIONS SURVIVE

One hundred and twenty-six years ago Withering of Birmingham introduced digitalis to medical practice. At that time he gave directions that the leaves intended for medicinal purposes should be gathered the second year, at the supposed time of the greatest activity of the plant, that is, before or at the time of flowering, in June or July. Further, it was directed by Withering that plants growing wild be employed, as being more potent than those grown in gardens.

Withering's prestige was so great that these ideas have been accepted, almost without question, since 1785, and have been embodied practically unaltered, in our pharmacopias. Closely associated is the idea that only English digitalis leaves are satisfactory; that German leaves are unreliable and the American plant generally worthless.

Sharp and Lancaster found that "a good reliable tincture could be made from first year's plants alone." They also observed

"that leaves were intensely bitter [hence were presumably active] long before the time of flowering and long after the period of flowering, provided the weather was dry and the plants had not been soaked by heavy and continuous autumn rains or nipped by frosts." Their experiments also showed the wild plants and the cultivated plants about equally potent.

These observations agree with those of Worth Hale, of the Hygienic Laboratory of the Public Health and Marine Hospital Service. In a recently published *Bulletin* he reports tests of two batches of first-year American garden-grown digitalis, side by side with selected second-year English leaves. One batch of American leaves was 40 percent more active than the English; the other batch 28 percent more active.

While, of course, these tests are not conclusive they show that *we have been taking our digitalis knowledge largely on faith and tradition*. Only one thing seems to be certain, and that is, that digitalis is an exceedingly variable plant and that "leaves from the same locality may vary widely in activity not only at different harvests, but, what is equally important, leaves of the same locality of the same harvest."

The amount of traditional medicine surviving in our books is enormous. The digitalis example is only one. Hundreds of other instances can and will be dug up as the therapeutic renaissance goes on.

CONSISTENCY, THOU ART A JEWEL!

JEWEL NO. I.

The editors of the *Association Journal*, the trustees of the American Medical Association, the Council on Pharmacy and Chemistry of that body, the cooperating editors of the official state journals, all these eminent gentlemen for several years have been busily engaged in upbraiding us lesser lights of the independent medical press for foisting upon the medical profession, advertising and otherwise inculcating, advising and permitting, the use of patent and proprietary "nostrums" of divers and several kinds.

Tempora mutantur et nos illis! Of late not a single number of our revered colleague and contemporary, the *Journal of the Ameri-*

can Medical Association, rarely a number of the other "official" journals, state and national, has appeared without some laudatory comment, remark or advisement relative to the virtues of that fancifully-named, profitable, proprietary, patented nostrum, Salvarsan! And not a word of protest from the supraethical "high-brows."

Oh, inconsistency, thy name is "606"!

(*To be Continued.*)

There are millions of positions in the busy world to-day,
Each a drudge to him who holds it, but to him who
doesn't, play;

Every farmer's broken-hearted that in youth he missed his
call,

While that same unhappy farmer is the envy of us all.
Any task you care to mention seems a vastly better lot
Than the one especial something which you happen to
have got.

There's but one sure way to smother Envy's heartache
and her sob;

Keep too busy at your own, to want "the other fellow's job."

—Strickland W. Gillilan.

"THE UNITED DOCTORS"

A friend of mine here in Ravenswood who has just received a country paper from "down home" just told me something which he saw in it that struck him as mighty funny.

There was a big announcement in the advertising pages, that "The United Doctors will be in Town Tomorrow." A little investigation disclosed the fact that the "United Doctors" consisted of just one man, but this doctor was a composite of numerous medical sects, a *multum in parvo* (with emphasis on the "*parvo*."). He was an allopath, a homeopath, an osteopath, a hydropath, in fact, he had combined in his single person all the "paths" which (according to one witty individual) "lead to the grave."

While this is funny, how serious it is. The most absurd, the most dangerous delusions and superstitions concerning the practice of medicine are hugged eagerly to the breasts of thousands of poor, suffering, foolish individuals, who undoubtedly see in the asinine folly of a man like this, Munyonized "hope" to the *nth* degree.

Will the people never learn? No, Brethren, they never will learn unless we take the trouble to teach them. And that puts the problem right squarely up to *you*. What are you doing to teach them better in your

community. Are you sitting quietly in your office, languidly chewing your fine cut, spitting contemplatively out of the window, and wondering why business doesn't come your way?

There is a battle here for us to fight, and it is worth fighting for. If you do not feel it expedient to make open personal warfare on quackery, this much you can do. Secure a supply of reprints of Dr. Wm. J. Robinson's splendid article upon "Scientific Medicine vs. Quackery" (which has been running in *CLINICAL MEDICINE*) and put them into the homes in your community. When "your folks" know just how the fakers work their tricks, it will not be a very easy matter for quacks like this "United Doctors" to break into your town and carry away the shekels which should be reposing peacefully in your own pocket, or deposited to your credit in the local bank.

If you want any of these Robinson reprints, we can supply you at the rate of \$2.00 a hundred. If you have the nerve to stir things up (and why haven't you?) it will be a good plan for you to order a few today.

The chief reason that everybody is not successful is the fact that they have not enough persistency. I always advise young men who write me on the subject to do one thing well, throwing all their energies into it.—

—John Wanamaker.

WITHHOLD THE CHLOROFORM

In *The Medical Times*, Beverly Robinson says: "The wisdom and horse-sense of the old practitioner when dealing with disease are frequently more valuable to patients than the most refined and latest acquisition of the junior physician."

"While it is a great mental satisfaction to establish the diagnosis and prognosis of a case as accurately as possible, so far as the judicious care of these cases is concerned it does not make much difference practically. We have only just so many reliable remedies in the drug line, and they are not many; and as to nursing in a rational and useful way, or the employment of physical methods of amelioration, the really useful ones are fairly well understood by the bulk of good practitioners of experience."

Dr. Robinson carefully distinguishes between real advances and simple fads. He

says that not one operation will be performed ten years from now, where ten are done today, and condemning the suffering organ to removal will be looked upon as a reproach in the future.

Moreover, he states that finding the tubercle bacillus does not complete the diagnosis or necessarily indicate the prognosis, since there are varying degrees of virulence with this microorganism. Whatever may be the reason, some strains of tubercle bacilli are much more malignant than others. This may be due to special noxæ, attending the bacillus, but more likely is to be explained by the difference of the soil in which it is implanted. The resisting power of the individual, has very much to do with the results of any infection.

"AUDACITY"

Under the head of "Audacity," Dr. Scudder publishes in *The Eclectic Medical Journal* a brief editorial, so remarkable in some respects that it deserves notice.

In this publication he takes us to task for having had the "audacity" to question a statement that emanates from Germany! Unheard of! Certainly we see no recourse but to plead guilty of *lèse majesté* and throw ourselves on the mercy of the court.

Eclecticism grew out of an American revolt against the dominance of European ideas and methods. It demanded originally that due attention should be given to American remedies, and that when these were as good or better than the European, we should not continue the use of the latter simply because they were European.

We have not the least particle of prejudice against anything European, but we are Americans, and in the case of ideas, or of remedies, we stand ready to take and adopt the native product when it is better than the imported. We have a very great respect for German medicine, but when it comes to accepting anything which comes from Germany as conclusive, we draw the line. We will accept anything German if it is right, but we are not surrendering our right of judgment, of opinion and of action, to the highly cultured products of the Teutonic school

Prof. Tschirch, the "authority" quoted by Prof. Scudder, is a great man, and he knows quite a good deal about drugs, and especially about alkaloids; but neither he nor any other man who has ever lived knows all there is to know; and when Prof. Tschirch says something which we do not believe is true, there is no reason why we should not say so, and continue thinking it, until we are shown to be wrong.

I fear that Dr. Scudder is finding difficulty in holding people within the little corral which he and his immediate friends have built around them. The big, wide, developing "outside" world of Science has too many attractions to keep thoughtful men perpetually penned within narrow bounds.

Strong souls within the present live,
The future veiled, the past forgot;
Grasping what is, with hands of steel,
They bind what shall be to their will.

—Lewis Morris

CORYZA + GELSEMININE = O

A doctor's wife puts me the following query: "Did you ever try gelseminine to abort a coryza?"

No, curiously enough I never did, although gelseminine is one of my many hobbies, and I have learned to look upon it as one of the most valuable remedies in my case. To abort a coryza I usually rely upon inhalations of formalin, and on calx iodata, of which I take or prescribe two grains and repeat every ten minutes until ten to twenty grains have been taken, or until the irritation of beginning coryza has ceased. One or other of these two remedies (or both together) almost certainly succeeds if used quickly enough; but if the attack has gone on too far to be cut short, I have relied mainly upon gelseminine to relieve the symptoms and lighten the attack. I shall take the lady's suggestion, however, and give gelseminine a trial in my next case, beginning with 1-50 grain, allowing it to dissolve on the tongue and to be absorbed as much as possible from the mouth, repeating this dose every hour if necessary.

During the last month the writer has suffered the severest cold he has encountered for many years. The fault is exclusively his own, since he did not take the trouble to

push the button and summon a messenger to get him some calx iodata, when he began to sneeze.

This cold is peculiarly aggravating from the fact that as soon as the victim gets into bed the cough commences, which continues indefinitely, to his great exasperation and distress. There is not much cough during the day, but hoarseness so decided as to interfere with his favorite pastime of lecturing to medical students.

Various remedies gave some relief. The other evening he was driven to the use of codeine to obtain some amelioration. A milligram of codeine (1-67 grain) allowed to dissolve on the tongue, repeated every fifteen minutes for three doses, sufficed to give some hours' rest. The next night it required nine granules to obtain this. The third night he took a centigram of codeine, (1-6 grain) which gave him just two hours rest; and it required three centigrams, or 1-2 grain, to afford a reasonable amount of sleep throughout that night. Here was the genesis of the establishment of a habit, since the affection returned with increased vehemence each night.

Next night he dropped the codeine and substituted emetin, taking two centigrams, 1-3 grain. The relief was fully as great as that from the codeine. In two hours he awoke coughing, when three centigrams (1-2 grain) were taken. This lasted until 5 a. m. when awaking again with a cough he took four centigrams, 2-3 grain. As a result of this slight vomiting occurred, but the cough has not been as bad since, and relief has been obtained with smaller doses of emetin, until on one night one dose of three centigrams endured from 10 p. m. until 7 a. m. The next morning saw less cough, less irritation and less hoarseness than any time for nearly four weeks; so that after all we come back to the fact that the very best expectorant in our possession for acute respiratory catarrh is ipecacuanha or its most valuable active-principle, emetin.

In this respect the writer has repeated a curious observation made previously, and that is that no remedy, not even emetin, so quickly induces a loosening of the cough by increasing the discharge from the respiratory tract as apomorphine, and that even in

doses of 1-10 grain it does not cause nausea when taken in the stomach or on the tongue. But the effect is not curative. It wears off, leaving the inflammatory process to go on as if it was simply delayed slightly by the remedy. It quickly gives temporary relief, but it does not cure.

Emetin cures. Hereafter I shall use emetin, pushing it with small and repeated doses until the beginning of nausea is manifested, by which time the strength of the attack is broken.

The declining stages of the malady require small doses of sanguinarine, a milligram (1-67 grain) every two hours, to stimulate the vitality of the affected tissues and induce curative action.

Don't stop to think if you can think without stopping.
 The distant mountains, that appear
 Their solid bastions to the skies,
 Are crossed by pathways that appear
 As we to higher levels rise.

John G. Whittier.

BATHS IN FEVERS: THE TECHNIC

While the advice to employ baths in typhoid fever is generally given in textbooks and monographs, the technic is rarely described with the exactitude one might wish. For like most other things, there are a right and many wrong ways of giving a bath. Milhit, in *Le Monde Médical*, gives the following procedure:

Give the bath in the sick-room. Change the water for each bath. Attendants must guard against infection by the bath water. Test the temperature of the water just before the bath. The patient must be nude. Raise him with the arms under the shoulders and knees; let him into the water gently, first applying petrolatum to the buttocks. Then prepare the bed. Throwing back the covers, place a mackintosh on the mattress and over this a sheet.

The patient always grumbles at the water, shivers, and wants to get out, saying he is sick or faint. Pay no attention, but keep a finger on the pulse, and the discomfort subsides. In ten minutes he feels cold, and soon shivers in reality, with intense discomfort, when he should have some hot drink with a little brandy, the limbs being lightly massaged. If the torpidity lightens,

the teeth and mouth may be cleaned. Do not leave the patient alone while in the bath. If there is faintness, limit the immersion to ten minutes; if collapse threatens, remove him at once. Otherwise a bath of a temperature of 82° F. may be continued twenty minutes. The physician should be present at the first baths.

After removing the patient from the bath, hold him to let the water drip off, then place him in bed without any rubbing or drying, cover well and leave him twenty minutes. The reaction that then occurs is very disagreeable, and shivering may increase, but gradually is replaced by a sense of comfort. Some drink should be given when this begins. If reaction is imperfect, the bath was too long-continued and too cold. In that case apply hot bottles to the feet, cover with warm sheets, and give hot drinks.

After the twenty minutes, as said, the sheet and mackintosh are removed and the patient is quickly put in a warmed robe, the buttocks are examined, petrolatum and powder are applied if needed, and, lastly, the temperature is taken in the rectum to determine the benefit secured. There should be a reduction of one or two degrees.

While there are few contraindications to the baths, one is absolute—suspected perforation or peritonitis. Free intestinal hemorrhage or decided faintness calls for suspension of baths for some days. Cardiac symptoms or syncope only indicate a close watch while the patient is in the bath. These are all—nervous prostration and menstruation are not contraindications.

After the third bath the water should be quickly reduced to 82 or 85° F., but in hyperpyrexia or if the fever is not diminished the water may be lowered to 80 or even 75 degrees. At 70 degrees the baths are very distressing and may induce pulmonary hyperemia.

If despite baths at as low as 75 degrees the fever remains above 104° F., then (1) continue the bath for thirty minutes, with a big ice-bag on the belly; or (2), if this fails, repeat the baths every two hours, of twenty minutes each.

In ordinary typhoid fever the first bath should be at 88° F., then 85°, then 82°, but never lower, a reduction of two to three

degrees being enough. Whenever the temperature (taken every three hours) exceeds 102 degrees, the bath is to be repeated; or even below this point if headache or night-mares occur, or if 101 degrees is reached at 6 o'clock p. m. If no baths are given during the night, the last one should be at 9 in the evening and the first at 7 in the morning.

If necessary, the baths may be replaced by wet-packs, or cold ablutions with diluted vinegar. Small doses of quinine or coaltar antipyretics may be also employed.

As adjuvants, Milhit recommends that during the bath a large sponge dipped in water at 66° F. be slowly squeezed over the patient's head, but not the face; or water at 66° F. may be poured over the head, if headache has been troublesome. This may be repeated every ten minutes. This is not always well borne.

Sometimes the patient is restless, talkative and delirious, with fever below 100° F., prostration becoming marked, with tendency to hypothermia. Then the body-heat must be raised to 102° or 103° F., by baths between 90° and 96° F., when the patient will quiet down and the condition improve. Warm baths are also required by pulmonary or cardiac complications.

If collapse threatens, Chantemesse's method should be employed: Put in just water enough at 95° F. to reach the navel. Have at hand a pitcher or two of water at 55 degrees, seat the patient in the bath and pour the cold water over him. Then quickly take him out, rub down, roll in a sheet and warm by means of hot bottles. Reaction will be immediate. Milhit terms it a "veritable resurrection." The patient awakes, his eyes bright, the pulse improves, and the heat rises. If the case is critical this may be repeated in half an hour, otherwise in two or three hours. Under this the temperature has risen from 95° to 103° F. in a few hours. Sparteine or caffeine may also be given. One must be sure this is really collapse and not intestinal hemorrhage or perforation. The measure must not be abused, or pulmonary hyperemia may result.

The man who advocated the foregoing treatment knew nothing of the part played in typhoid and other fevers by fecal toxemia, or that the fever, delirium, headache, pros-

tration, and so forth, depend largely on this factor and subside when the bowels have been thoroughly emptied and disinfected. Accepting the dictum that the baths should be employed when the temperature rises to 103 degrees, they are rarely necessary, because with the clearing and disinfecting completed the temperature does not rise to that point. Should it do so, it is a sure indication that the bowels need attention. At best the baths, as will be seen by the foregoing account given by an enthusiastic advocate, are troublesome, precarious and disagreeable. If also unnecessary, why use them? Since the crazy fad of "anything but drugs" seems to be subsiding, we may return to common sense and an intelligent utilization of the remedial powers residing in medicine.

Had Columbus, half seas o'er,
Turned back to his native shore,
Men would not, today, proclaim
Round the world his deathless name.
So must we sail on with him
Past horizons far and dim,
Till at last we own the prize
That belongs to him who tries
With faith undying!
Own the prize that all may win
Who, with hope, through thick and thin
Keep-a-trying.

—Nixon Waterman.

A CASE OF ACONITE POISONING

In *The Lancet*, Inglis describes a case of poisoning from an unknown dose of aconite, which was swallowed by mistake. The quantity was roughly estimated to be sufficient to kill six persons. The treatment consisted in the hypodermic administration of strychnine and digitalis, with brandy *per rectum*, and artificial respiration, which was kept up for six hours. At the end of this time improvement set in, and the patient recovered. At three different times the patient appeared to be dead after clonic convulsions.

She was found lying on the floor, speechless, cold, pale, the skin moist, pulseless, respiration very faint and irregular, pupils dilated and insensitive, temperature 96.6° F. No ptosis of the eyelids. At intervals she complained of terrible gastric and abdominal pains. The body was acutely alive to a

sensation of irritation and prickling of the skin, this being succeeded by numbness. The mind was clear and unaffected except during the convulsions.

Cases of aconite poisoning are not infrequent, the tincture usually being taken in mistake for some other liquid. Happily for the individual, the tincture of aconite of the pharmacies is very frequently even less toxic than seemed to be the case in the instance recorded here.

Physicians who use aconitine generally, know that it is of uniform strength and employ it according to the excellent rule given by Prof. Shaller. Thus administered it is perfectly safe and always efficient.

Many a physician who says he is wedded to his profession undoubtedly married in haste and is repenting at leisure.—Medical Review of Reviews.

PERCUSSION OF THE KIDNEYS

In *The Medical Record*, February 4, Prof. Otto Lerch supplies an exceedingly interesting paper on percussion, especially as applied to the kidneys.

The differences reported by various observers depend partly on their varying acuteness of hearing, and especially on the strength of the percussion stroke. One man will think that stroke a light one, which another will look upon as far too strong. A light and delicate stroke must be used to obtain trustworthy results. Dr. Lerch finds the plexor-pleximeter percussion the easiest to learn and giving the best and most uniform results. As pleximeter he uses a thin ivory plate, as plexor a hammer with black rubber or ebony handle, and heavy steel head with black rubber tip.

The textbooks on diagnosis are unanimous in condemning percussion of the kidneys as valueless. Dr. Lerch, however, finds that these organs can be mapped out with accuracy and ease, thus showing changes in size which are very slight indeed.

Percussion is best performed with the patient lying face downward, with a cushion under the belly to put the muscles of the back on tension. The location of the percussion dulness shows that it is actually due to the kidney. The form of the dulness corresponds to the form of the kidney. In mov-

able kidneys with palpable organs the check is perfect, since percussion shows the displacement of the organ. Usually the kidneys at least partially return to their natural position.

In every case the clinical symptoms correspond to the percussion figures. If these indicate a contracted kidney, more or less advanced, one or both will be found decreased in size. If congestion or large white cirrhotic kidney is diagnosed, the percussion figure will bear out the diagnosis, if it is accurate. In movable kidney we find the expected downward displacement of the projected figure.

Dr. Lerch tested his method on the cadaver in four cases, fixing the kidney by the use of hat-pins. These investigations were resumed at the Royal Augusta Hospital of Berlin, in connection with Prof. Oestreich. Nine subjects were employed, and on opening the abdomens the conditions were found to correspond with those determined by percussion.

Dr. Lerch sums his paper as follows:

"By replacing the stroke with the drop in percussion, we have a method that enables us to make out with accuracy and ease the organs situated close to the body wall, or deeply situated, the percussion lines corresponding sharply to the organs. We have a method superior to the usual method of percussion, in that it permits us to judge from the rebound of the hammer the change of vibrations and the percussion note at one and the same time, and especially that it eliminates largely the individual element and makes results uniform.

"Further, according to the most prominent clinicians, kidney percussion has been impossible except in cases of very much enlarged kidneys, when it is for practical purposes useless. My methods give good results in kidney percussion under any conditions and with any patient, supplementing the diagnosis of the diseases of the kidneys and giving a ready and easy means to determine the actual size and location of the kidneys, which is of value in all cases, as stated before.

"Again I will repeat that the drop is impossible unless the hammer is very lightly held."



Therapic Aspects of Epileptic Pathophysiology

By JAMES G. KIERNAN, M. D., Chicago, Illinois

THE limited conception of epilepsy taught and often held, especially by subsidized college professors, interferes with diagnostic, prognostic and therapic action, since these are indivisible. Diagnosis of recovery is as important as diagnosis of the disorder itself. Any definition of epilepsy must include all its clinical phenomena. The following, offered by E. C. Spitzka thirty years ago, in my judgment is the most complete in this feature:

Spitzka's Definition of Epilepsy

"Epilepsy is an encephalic morbidity without palpable characteristic lesion, shown in explosive activity of an unduly irritable vasomotor center, leading to complete or partial loss of consciousness, which may be preceded or followed by various phenomena expressing the undue preponderance of some cerebral districts and the suspended inhibitory influence of others."

The vascular phenomenon which so frequently accompany an epileptic attack are not absolutely essential factors of epilepsy. Sudden anemia of the higher nerve-centers may produce convulsions, but it does not follow from this action that arterial spasm is a necessary cause of the epileptic fit.

Convulsions, while a phenomenon of epilepsy, is neither an initial nor a constant one. Irritative "focal" lesions of the brain may produce convulsions, but this does not demonstrate that idiopathic epilepsy must have a similar origin. An area of inflammatory softening in or near a brain district in rela-

tion to the arm-muscles may produce epileptiform spasms beginning in the muscles whose center is affected, which extend to the other muscles of that half of the body, or suddenly to the entire voluntary muscle system.

This does not prove, however, that the epileptic discharge must have extended through the cortex by irradiation. This is certainly not the case where transition from the localized or "focal" spasm to the general convulsion is sudden.

Primary irritation has determined secondary irritability of the reticular gray matter of the brain isthmus, particularly of the pons and medulla, which is the great convulsive center. The characteristic phenomena of the epileptic onset have been produced in animals deprived of the cerebral hemispheres. A slight puncture with a thin needle in the reticular gray matter suffices to produce in the rabbit both the true epileptic character and the automatism noted in aberrant attacks.

All the great nerve-strands conveying motor impulses of voluntary, automatic, or sometimes of reflex character are united in a comparatively small area of this nerve segment. Relatively slight disturbance at this point will produce functional disorder involving the whole bodily periphery.

If sensory irritation of a given spinal nucleus be continued until it has produced a reflex movement in the same segment, any resultant action which may occur does so, not in the next or succeeding planes, but in the

medulla oblongata. The motor reaction is then expressed in laughing, crying or deglutitory spasms, and if the irritation be great, in epileptic and tetanic spasms likewise. Laughing, crying, and deglutitory spasms are readily produced by molecular oscillations induced by the irritation which travels along associating tracts from the spinal segment to the location in the medulla of the nerve nuclei presiding over facial, laryngeal, and pharyngeal muscles.

How epileptic and tetanic spasms consisting in movements whose direct projection is in the cord, not in the medulla, can be produced by medulla irritation is not at first apparent. There are scattered nerve-cell groups in the medulla without connection with the nerve nuclei or connection with the longitudinal associating strands. These cells constitute a presiding center over the spinal system. No spinal center compares in influence with the cord as a whole.

Evolution of the Medullary Center

Like other higher differentiations, elaboration of this medullary center was gradual. The frog's medulla has acquired the power of reproducing general spasms, a power still retained by the cord. Medulla action is here not so well marked as in mammals. The reticular ganglion of the adult medulla is not part of the central tubular gray matter. While originating from this in the embryo, it has been finally isolated from its mother-bed. It constitutes a second ganglionic category. The association fibers bringing it into functional union with the first category formed by the spinal gray in lower animals have so assumed the position of projection fibers in the higher as to constitute a second projection tract. Together, both form a second projection system.

The scattered medullary gray matter, though its cells as a rule are diffusely distributed, constitute a large ganglion with numerous many-sized multipolar cells, many simulating in shape and some exceeding in size the "motor" cells of the lumbar enlargement. They constitute, so to speak, a reticular ganglion scattered in the reticular substance of the medulla from the upper end of the fourth ventricle to the pyramidal decussation.

The cells of the reticular formation are connected with the nerve nuclei on the one hand, and with longitudinal fasciculi which, since they run into the cord, terminate either in the gray matter or the nerve roots directly, for nerve-fibers do not terminate with, as it were, blind ends. The mammalian reticular ganglion is scattered among fibers which come from the higher centers. The reticular ganglion, hence, is an intercaler station for fibers from a higher source. Originally the ganglion was an independent station.

In reptilia this body of cells is too considerable merely to subserve the purposes of termination in them of the few cerebral fibers possessed by this order of animals. The vertical strands, moreover, are notably increased in their passage through the medulla oblongata.

The Medulla Oblongata the Regulator of Rhythmic Movements

The medulla oblongata with its reticular ganglion is the great rhythmic center. In fish the movements of the operculum and mouth, in sharks those of the spiraculum, in perennibranchiate amphibians the branchial tree, in the infant the suctorial muscles, in all vertebrates the movements of deglutition, of the heart and of the respiratory muscle—all rhythmic movements, in short—are under control of the medulla oblongata. Its early differentiation is related to early manifestations of rhythmic movements in the embryo and to their predominant importance in lower animals.

Rhythmic movements may, however, be spinal, may even be controlled, as in invertebrates, by peripheral ganglia (heart of embryo). Higher development concentrates rhythmic innervations at a point where anatomic association (the expression of the interinfluence of these movements) may be affected.

Physiologic pathology of the epileptic attack is evident in the condition of the epileptic in the interval as well as in the explosion itself.

The epileptic constitution is characterized by general lack of tone associated with exaggerated reaction and irritability. Thus the pupils are at once widely dilated and unusually mobile. The muscular system, though

generally related, manifests exaggerated reflex excitability. The mental state presents at once great indifference and undue irascibility. The vascular system is depressed in tone in the interval, but displays rapid, decided changes under excitation.

The nervous system as a whole resembles an elastic band which, continually on the stretch, overshoots its mark when one end is let go. Under normal circumstances, being less stretched, the band is not liable to fly afar when the check is removed. An irritation which in health produces muscular restlessness, accelerated respiration and pulsation, and various mental phenomena within normal limits, in the epileptic causes similar but more intense phenomena.

Mechanism of an Epileptic Explosion

The nervous irritability of an epileptic manifests itself in one direction especially. An important cerebral vasomotor center is diffused through an area between the thalamus and subthalamie region and the pyramidal decussation below. Irritability of this produces the sudden arterial spasm in the carotid distribution which is so characteristic a feature of the epileptic onset. Simultaneously with artery contraction the pupil undergoes an initial contraction, and relaxation instantly results in both cases. Sudden interference with the brain circulation produces unconsciousness and destroys the checking influence of the higher centers on the reflexes in an analogous manner to that of shock.

Meanwhile there has been a sudden deprivation of arterial blood and a sinking of intracranial pressure, so far as the great cerebral masses are concerned, and as sudden an influx of blood to the unaffected vertebral artery district, whose territory thereby becomes hyperemic. As a result, the great convulsion center (the medulla) being overnourished, functional excess (that is, convulsion) occurs, unchecked by the cerebral hemispheres disabled by their nutritive shock. Epileptic unconsciousness and coma resemble shock more than they do cerebral anemia or syncope.

Impeded return circulation of venous blood now comes into play. This venous blood, through accumulation of proteid substance,

acts as a toxic agent, producing the severer symptoms noted during postconvulsive periods. The elastic-band characteristics are further shown: First (*a*) in the contraction of the retinal artery; (*b*) the initial and very brief contraction of the ordinarily dilated pupils; (*c*) the sudden pallor of the countenance. Secondly, (*a*) in the secondary expansion of the retinal arteries; (*b*) the secondary dilatation of the pupils; (*c*) the secondary flushing of the face. Thirdly, in the conditions found in those dying immediately after severe convulsive seizures or in the status epilepticus.

Petit-mal

Epilepsy presents an enormous number of subgroups deviating from the ideal convulsive form. In petit-mal the initial arterial spasm is confined to the surface of the hemisphere, leaving the thalamus ganglia undisturbed, causing momentary unconsciousness, or abolition of cortical function, without the patient falling, while his automatic ganglia still carry on their functions. At the same time, with the lesser spasm, there is less extensive sinking of intracranial pressure and less consecutive collateral hyperemia of the lower centers, and therefore no convulsions occur.

Sometimes the arterial spasm does not affect the entire cortical surface simultaneously; some one trunk may be more pervious, and an afflux of blood may occur in its special field, where certain impressions and motor innervations are stored. As a result, the function of the relatively well-nourished territory is exalted. If it be a sight-center, sights, colors or luminous spectra are seen; if it be an olfactory, odors are smelt; if a tactile, crawling, tingling, and cold sensation; if a speech-center, cries, phrases and songs are uttered. The manifold epileptic aura is simply an exaggerated but isolated and limited cortical function.

The aura recurs through the well-known physiologic law that any nervous process, morbid or normal, having run through certain paths, these paths are henceforth paths of least resistance for that process. To the same law are due the peculiar convulsive equivalent, pre- and post-epileptic

mental states. These epileptic mental states may occur whether there be grand-mal or not.

Masked, or larvated, epilepsy may be merely an exaggeration of the epileptic character.

Convulsions

The relations of epilepsy to insanity are by no means simple. Epilepsy may be merely a complication, or a sequel, or a preliminary to recovery in certain psychoses. None of these cases, however, belong to the true epileptic alienations. Epilepsy produces these psychoses, and they are essentially epileptic at bottom. Two broad types of epilepsy are usually recognized—the epileptic mania and the epileptic dementia—but outside of these occur numerous mental manifestations.

Varieties of Epilepsy

Krafft-Ebing divides the mental manifestations arising from epilepsy into: The psychical degenerations (epileptic dementia); the transitory epileptic psychic disturbance (preceding, following or replacing convulsions) further divided into: (1) Epileptic stupor. (2) States of imperfect or dazed consciousness with fright (Falret's *petit mal intellectuel*); with frightful delusions and hallucinations (Falret's *grand mal intellectuel*) with expansive religious delusive conceptions; with dreamy stupor; with dreamy stupor followed by rapid flights of ideas; the epileptic psychoses which stimulate ordinary types of insanity, but present certain symptomatic peculiarities and have an epileptic basis.

E. C. Spitzka makes the following division, valuable for clinical purposes: *First*: the epileptic psychic equivalent, which replaces the epileptic convulsions. *Second*: The acute postepileptic insanity, which almost immediately follows the convulsive attack (the ordinary postepileptic stupor being included as part of the convulsion), or the psychic equivalent of such a convulsive attack. *Third*: The preepileptic insanity which precedes the outbreak of the convulsive attack, or its equivalent, and increases up to the amount when the paroxysm explodes. *Fourth*: The purely intervallary epileptic insanity, which neither immediately

following nor preceding a paroxysm occurs in the interval between the convulsions. *Fifth*: Epileptic dementia, which may complicate any of these psychoses and render their diagnosis, when occurring in old cases, difficult.

According to C. H. Hughes there may be ante, post, or supplemental paroxysms of maniacal automatism in which acts, apparently in a volitional manner, but without free or voluntarily directing will, are performed. These acts may be violent or incendiary, or otherwise destructive and criminal, as well as harmless.

According to Falret: "A remarkable phenomenon which frequently complicates the incomplete attacks of epilepsy, or in the intervals between two perfectly developed attacks, deserves mention. The patient seems to have come to himself; he enters into conversation with those persons who surround him; he performs acts which appear to be regulated by his will, and seems to have returned to his normal state. Then the epileptic attack recommences, but as soon as it has ceased and the patient has recovered his reason, it is found that he has not preserved any recollection, either of his words or acts which were said and done in the interval of the two attacks." Under the head of "*petit mal intellectuel*," Falret describes a condition which may continue for several hours, or several days, after the postepileptic stupor has subsided, in which the patient becomes sullen, deeply dejected, very irritable, and feels an utter inability to fix his thoughts and control his will. Under the term "*grand mal intellectuel*" he describes an analogous condition of longer duration, intermingled with alternate stupor and furious excitability.

Although not correlated, these forms have long been recognized by nearly every alienist of repute. Griesinger says: "Striking psychic disturbances sometimes occur before the attack; sometimes a confusion and obscuring of the consciousness, resembling drunkenness; sometimes deep dejection; sometimes an extremely suspicious, angry disposition; sometimes violent hallucinations of any and all the senses immediately precede the attack. During the attack, in fully developed cases, the psychical faculties

are completely suspended, the patient can not remember any act which happened at the time, although his fixed, terrified, astonished expression gives the impression that he is suffering severe mental pain. Attacks may precede and alternate with intermittent convulsions. Others, after partial or complete loss of consciousness, execute combined movements, which correspond to a state of dreaming of a varied, but, as a rule, of a depressing nature."

The *epilepsia larvata* of Morel, the masked epilepsy of the English authors, was described first by Falret, and soon after independently by Morel.

"The invasion of these attacks is sudden. There is always loss of memory of them. The acts done in them are instantaneous and of an exceptional violence. Hallucinations, when present, are always terrifying, and at every attack the same phenomenon presents itself. The masked epilepsy condition presents peculiar symptoms, among which may be found at the onset excessive instability and mobility of character. Later, mental transformations reproduce themselves in a true periodicity."

So-called "masked" epilepsy seems the purest form of epileptic psychic equivalent. There are, then, based on chronology, five varieties of mental alienation due to epilepsy—the preepileptic insanity, the psychic equivalent, the postepileptic insanity, the intervallary insanity, and epileptic dementia.

Frequency of Occurrence

Epilepsy produces, in my experience, about $4\frac{1}{2}$ percent of the hospital cases of insanity. Regarding the frequency of the various forms it may be said that epileptic dementia occurs most often in hospitals.

The psychic equivalent alone is more frequent than usually supposed. The intervallary epilepsy occurred, in my experience, in about 2 percent of the epileptic alienations. The equivalent not infrequently manifests itself in the form of moral perversions only. The patient is a dipsomaniac, or exhibits sexual perversion, or is a kleptomaniac during the psychic equivalent, being perhaps perfectly moral and upright at other times. Sometimes murderous attacks are made during the psychic equivalent, which ceases

with the crime. Checking epileptic attacks by treatment may bring on this condition, as in cases reported by Bannister, Stark, Spitzka, Harriet Alexander, W. A. Hammond, Voisin, Hughes, Moyer, and in others under my own observation. Hughlings Jackson insists that when mental symptoms appear to replace the fit there is a very transitory epileptic paroxysm, but he admits that very frequently no signs of such are discernible.

Epileptic Psychoses

The epileptic psychoses, as a rule, are characterized by extreme violence; by, not infrequently, initial hallucinations; and by sudden subsidence of such symptoms. Epileptic dementia, when present, may mask all these, but even in dementia epileptics display marked treachery.

According to Magnan, Delasiauve, and Féré, in epileptic dementia, varying with the gravity of the mental condition, the attention is enfeebled and null; memory is confused, untrustworthy, and at times entirely lost; conceptions are obscure, abortive, or false; following a train of thought is painful, incorrectly done, and at times impossible; the imagination is not markedly developed. From this intellectual mutilation results mental enfeeblement.

In epileptic insanity the alienist often has to reason, so to speak, in a circle; the character of the immoral act suggests epilepsy; the physical and other evidences being found, the act is regarded as of epileptic origin. These physical symptoms become of value as corroborative evidence.

Physical Evidences

Certain authorities have laid stress on asymmetry of the face and skull as evidence of epilepsy. Howard has found such asymmetry in 80 percent of the insane epileptics coming under his observation. Garel has found 55 percent of the epileptics coming under his observation to present asymmetry. This symptom is, however, chiefly of value as leading to further investigation and as evidence of congenital defect.

Echeverria, who is corroborated by Howard, claims that the temperature of epileptics is always below normal. Echeverria also calls attention to a marked lividity conjunc-

tiva injection, and at the same time to a frequent expression of hebetude and astonishment.

Epistaxis is not infrequent during or after the paroxysm. Echeverria, Spitzka, and L. C. Gray lay stress on a dilated mobile pupil (hippus or chorea iris) as further evidence. It should be remembered that attacks occur at night, and blood upon the pillow and other circumstances may give indications as to the possible existence of nocturnal epilepsy. If the suspected attack of epileptic insanity be, as it often is, very brief, there will be noticed, just precedent, great irascibility succeeded by sudden pallor, furious violence, and slight after-stupidity.

Often an epileptic displays great religious tendencies. When a lunatic evinces marked religious delusive conceptions, is at the same time in a condition allied to stupor, kneels and prays to the physician, epilepsy may be suspected. I had a marked illustration of this in a patient who entered Manhattan State hospital, in consequence of developing insanity at the 1876 Moody-Sankey revival in New York. His insanity presented the character just described. His hereditary history was bad. After some months' residence in the hospital he had several epileptic attacks.

The Predominant Elements

The great elements in epilepsy are the cerebral irritability and excitability and the autotoxic state already described. Elimination is checked, whence toxic material accumulates in the circulation excitant to the great convulsive center. Before this accumulation there is generally strain on the oxidizing organs or on the eliminative organs taking the line of least resistance.

Under normal circumstances the toxic elements produced in the organism are eliminated by various channels. Some of these products are transformed in the alimentary canal into innocuous substances. Gases are eliminated by the lungs, other compounds are intercepted and decomposed in the liver, and others eliminated by the kidneys and skin. When any of these excretories is interfered with in the discharge of its duties, phenomena of autointoxication, such as headache, pallor, nosophobia, etc., occur.

The liver, which embryologically and functionally is two organs—one an eliminative and poison-destroying, the other a sanguifactive—by the peculiar intrinsic action due to the specific activity of its cellules, can diminish the toxicity of substances with which it is brought into contact. Such action is manifested, not only in the case of poisons introduced through various channels into the organism, but likewise in the case of toxic products elaborated within the organism itself in consequence of changes in products due to tissue activity.

In epileptics the liver, like the nervous system, suffers from the general instability. It has extra work to perform, but has not sufficient balance to do its ordinary work. Through this the toxic products of oxidizing organs are thrown back on them. The thymus disorders so relatively frequent in epileptics as in other defectives, and in many otherwise normal children, are due to the thymus thus becoming a point of least resistance. The kidneys are another point of least resistance, whose weakness is increased by an undue proportion of sodium chloride in the circulation. The adrenals imperfectly oxidize through aggravated insufficiency caused by dissociation of the adrenals from their overactive center in epileptics.

Even in the eliminative and oxidizing organs of epileptics this elastic-band instability is therefore present. Impoverishment of the brain-substance in oxygen has the effect of a chemic irritant which excites dyspneic respiration in the medulla and produces epileptic disorder of the convulsion centers. The buoyancy aura of epilepsy is due to an increased cerebral oxidation such as occurs in normal buoyancy or in mania, but which from the epileptic instability soon exhausts the brain supply, producing epileptic manifestations.

Epileptic instability is essentially the lack of balance of the degenerate or hereditary defective plus not rarely a higher ethical and intellectual background. The nerve-centers of the epileptic are, therefore, a powder magazine to which imperfect oxidation and elimination apply a torch. The type of the resultant explosion is determined by the nerve lines of least resistance.

Epilepsy and Its Treatment

With Special Reference to the Use of Verberna Hastata and Solanum Carolinense, Two Drugs But Little Known and Only Recently Employed for That Purpose

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A GOOD, terse definition of epilepsy is that given in the Standard Dictionary, which reads as follows: "Epilepsy is a chronic nervous disease, characterized in its more violent forms by paroxysms recurrent at uncertain intervals, attended by loss of consciousness and sensation, facial distortion, foaming at the mouth, convulsions of the limbs, and difficult, stertorous breathing. In the milder paroxysms there may be loss of consciousness without muscular spasms, or the spasms without unconsciousness."

The Etiology of Epilepsy

The chief predisposing causes are age, sex, and heredity. The age at which the first convulsion is most liable to occur is said to be from seven to seventeen years, but it may occur at any age from the cradle to the grave. The female sex is considered to be somewhat more liable than the male, but the difference is not great. Heredity is of more importance, and may be either direct or indirect; for while epilepsy seldom occurs in those who have no constitutional predisposition or hereditary tendency in this direction, it does not follow that the parents of epileptics were themselves epileptics, but rather that either they or their ancestors were sufferers from tuberculosis, alcoholism, syphilis, or some one of the neuroses, and that thus they have transmitted to their descendants constitutions more or less defective, especially in the direction of the nervous system.

The exciting causes are either structural or functional.

Structural causes are those which consist of definite anatomical lesions affecting the nervous system. These include wounds of the peripheral nerves, which produce "reflex epilepsy;" injuries of the skull, and resulting affections of the brain; and diseases and injuries of the brain and spinal cord.

The functional causes consist of conditions which are not appreciable anatomically,

and which may affect the nervous system alone, or the organism as a whole. These include hereditary tendencies (so that heredity is both a predisposing and an exciting cause); drunkenness in the individual; sexual excesses; severe mental strain; long-continued depressing emotions; and disturbances of nutrition.

In addition to these two classes of causes, there remains a large number of cases for which no definite cause can be assigned and in which we are for the present compelled to assume a spontaneous development of the disease. These are known as idiopathic cases.

Varieties of the Disease

Considering the symptoms as a whole, epilepsy is divided into three general classes:

1. *Grand-mal*, or *major epilepsy*, in which there is complete loss of consciousness, attended by muscular convulsions.

2. *Petit-mal*, or *minor epilepsy*, in which there is transient loss of consciousness without convulsive seizures.

3. *Cortical*, or *Jacksonian*, *epilepsy*, in which there are localized convulsions, sometimes known as epileptiform attacks, occurring usually without loss of consciousness.

According to Henle's theory, as stated in Niemeyer's "Textbook," there are two forms, a plethoric and an anemic. He suggests that in the former, besides the intense hyperemia of the hemispheres which induces the palsy, there is a less degree of hyperemia, capable of inducing symptoms of mere irritation, arising in the medulla oblongata; while in the anemic form, he considers that the lack of blood in the cerebral vessels occasions an increased blood pressure in the medulla, inducing in it a degree of engorgement sufficient to cause signs of irritation.

In reference to the location of the exciting cause as related to the central nervous system, epilepsy may be classified as either central or peripheral, according as the mor-

bid cause originates within the brain or spinal cord, or outside the central nervous system, usually from causes affecting the peripheral extremities of the nerves.

Theory of Epilepsy

The general theory of epilepsy, which approves itself to me as best explaining the conditions as I have met them in actual practice, is that which assumes the existence at the base of the brain—either in the medulla or the pons—of a reflex- or convulsion-center, irritation of which will produce an epileptic convulsion. This can be produced in guinea-pigs by mechanical irritation of the reflex-center. It can be brought on in human beings by irritation from many different sources, one of the most common of these being the condition of toxemia resulting from autointoxication of different origins.

When once a convulsion has been induced, from whatever cause, it is more easily brought on again, by the same or any other irritation; and when it has occurred a number of times, a change takes place in the convulsion-center itself, by which it brings on the convulsion without any definite cause.

This is the epileptic condition or change which is at the bottom of every fully developed case of epilepsy. The attacks now occur at regular, or more likely at irregular and widely varying intervals, irrespective of any irritant cause. Epilepsy is now established, consisting of two factors, the status epilepticus, or epileptic condition, which is a persistent change in the central nervous system which is continuously present, and the epileptic convulsion or paroxysm, which occurs at intervals only. It is to be noted, however, that the term "status epilepticus" is used by some authors in a different sense than that here given.

Prognosis of Epilepsy

Epilepsy does not belong in the list of self-limited, or spontaneously curable, diseases. According to careful estimates, less than ten percent of all cases of epilepsy are curable, and only fifty percent of carefully selected cases were benefited by prolonged treatment. It is therefore evident that the question of treatment is a very important one, and that any method or plan of treat-

ment which offers hope in selected cases is worthy of attention.

Indications for Treatment

1. *The first indication in all cases is to determine in so far as possible the morbid cause or source of irritation, and remove it when this can be done, or modify its action and lessen its activity when it cannot be removed entirely.*

Look out for all possible sources of irritation to the nervous system, either reflex or direct, such as an overloaded stomach, indigestion, constipation, intestinal autointoxication, alcoholism, intestinal parasites, teething in children, adherent prepuce, hooded clitoris, masturbation, sexual excitement and excesses, menstrual derangement, uterine or ovarian disease, mental excitement, depressing emotions, eye-strain, tumors pressing on the brain, depressed bone in the skull, injuries to any portion of the central nervous system or the peripheral extremities of the nerves, and any and all other sources of irritation which may suggest themselves in any individual case.

It is well to remember that the most common exciting causes of epilepsy and epileptiform convulsions are to be looked for in one of the three following directions:

a. Influences originating in the direction of the digestive organs. There are probably no more fruitful causes of convulsions than chronic constipation and an overloaded stomach.

b. Influences arising from the direction of the sexual system. This explains why the age of puberty is the most common period for the first appearance of epilepsy.

c. Influences coming from the direction of the mental functions. These include psychical influences of the most varied character, such as fright, grief, anger, painful excitement, joy, and unconscious imitation.

The search for causes should be made as thorough and complete as the nature of the case will admit, and may well include an examination of every organ and function of the body and the mind; for we shall find it to be true, as taught by Echiverria, that "epilepsy is not a morbid entity existing by itself, but a manifestation of manifold derangements disturbing the nervous system,

giving rise to definite inseparable conditions—the immediate cause of the convulsive paroxysm—that remains the same whatever the origin of the epilepsy. There is scarcely a disease affecting the human frame in which epileptiform convulsions might not happen as an incidental or essential phenomenon."

Remove Any Source of Irritation

Whenever and wherever the morbid cause can be located, or any source of irritation discovered which can conceivably act as a morbid cause or source of the convulsion, it should be removed where removal is possible, whether wholly or only in part.

Derangements of the digestive system should be removed or overcome, by the aid of dietetic precautions, hygienic rules, and medical or surgical treatment. Worms and teething in children call for appropriate remedies; and even in adults, the cause is sometimes found in some form of intestinal parasites. An adherent prepuce should be freed, and circumcision should be performed when necessary. Uterine and ovarian disease should receive proper local and general treatment. Brain tumors may sometimes be removed, depressed bone elevated, scar-tissues excised, and so on through the list. We have at our command all the resources of medical science, including the use of drugs, surgery, hygiene, dietetics, mental, moral, and physical therapy, and whatever else can be brought to bear upon the case.

Many difficult cases are greatly benefited by promoting active elimination, for the purpose of relieving the toxemia which usually accompanies and often greatly increases, even if it does not directly cause, the undue irritability of the reflex-center. The measures used for this purpose will vary with the nature of the case, the circumstances and surroundings of the patient, and the views of the physician; by which I mean that this condition of toxemia should be treated on general principles.

There should be a thorough cleaning out of the entire intestinal canal, and the rule should be, to "clean out, clean up, and keep clean." Calomel and podophyllin in small doses act well on the liver, while senna, cascara, and the laxative salines have their

place. The amount of water, and more important by far, the amount of solid matter passed by the kidneys, are of the utmost importance. The free drinking of water is almost always beneficial. There is here a large field for hydrotherapy, which serves many valuable ends besides elimination.

In many cases, however, we shall find that our patients will not cooperate with us to the extent of giving us an opportunity to carry out the necessary investigations, or apply the indicated remedy; and, again, after all has been done that the ingenuity of man can suggest, we shall often be obliged to confess that we are unable to determine the essential morbid cause, or if determined, to remove it. These cases we shall be obliged to class, practically if not theoretically, as idiopathic, and content ourselves with symptomatic instead of causal treatment.

Correct Habits Are Imperative

2. *The second indication is to teach the patient right habits of living, both as to diet and general hygiene.*

In order to accomplish this result, it is again necessary to secure the full cooperation of the patient. If this cannot be done, all the remedies which can be administered will only spell failure; for I regard it as a truism that no course of medical treatment can be adopted which is sufficient, alone and unaided, to effect a cure in an advanced case of epilepsy. Indeed, this malady is of so serious a nature, and the proportion of cures under any plan of treatment is so small, that it is necessary to bring to one's aid any and every conceivable means which can add to the chances of success.

I do not believe in the special efficacy of any particular fad or system of diet. The food must be plain, simple, and nonstimulating. It should be thoroughly masticated, taken at proper intervals, never in too large quantity at once, and never when the system is not in proper condition to assimilate it. That is to say, the ordinary rules of hygiene relating to diet should be scrupulously observed. Beyond this, any and every article of food which experience has shown to disagree with this particular patient should be carefully avoided. Every individual has a stomach of his own which varies from that of

everyone else in some respects; and what will agree with one person may disagree with another, seemingly under identical circumstances.

Meat should be allowed only in a very limited quantity, but I do not believe it is advisable to prohibit it entirely. The object in arranging a system of diet in cases like these should be to provide one which can be kept up indefinitely without disgusting the patient, and thereby causing him to rebel against it. Hence it should not be extreme in any respect. Fruits and vegetables are admissible in so far as they agree with the stomach. The bowels should be kept loose by a laxative diet in preference to the habitual use of drugs. Elimination by the kidneys should be promoted by the use of fruit juices, lemonade, oranges, and the free drinking of water.

The Saltless Diet

The saltless diet is now very generally recommended, and seems in many instances to be followed by good results. This method is sometimes known as the dechlorization or salt-starvation method, and was devised by Toulouse and Richet. It consists in the total withdrawal of salt from the diet, and the substitution therefor of sodium bromide.

The theory is that by substituting the bromide of sodium for the chloride of sodium, the blood takes up bromine instead of chlorine, and thus the nerves and nerve-centers are kept constantly bathed in bromine, which is considered the most powerful antiepileptic known. Another theory is that any decided amount of chloride of sodium in the blood acts as an irritant to the cerebrum, and increases the frequency and severity of the attacks. (William Lessem.) But Courmont and Cremien found that, while the convulsive tendency was held in check by the saltless diet combined with bromide of sodium, the cessation of the attacks was accompanied by a grave nervous condition, characterized by delirium and suicidal impulse, which passed away with the addition of salt to the diet.

It is evident that not only is the rationale of the saltless diet not yet understood, but even the fact of its beneficial effects is not

definitely settled. My own observation has convinced me that in some cases even the small quantity of bromide which is taken as a substitute for salt in the diet is injurious, having a distinctly unpleasant effect, which passed away when all bromide was omitted.

My present practice is a compromise between a strictly saltless diet and one containing the usual amount of salt. I direct that no salt be used with the food *as an additional condiment*, but do not require that the food be cooked strictly without salt. This plan works satisfactorily with the patients, and saves much trouble for the family, as well as the probability of a rebellion on the part of the patient, inasmuch as there are but few persons who will long continue a strictly saltless diet. Nor do I believe it to be necessary.

Adjustment of Exercise

Moderate exercise, both of body and mind, is beneficial; but severe and exhausting labor, either physical or mental, should be strictly prohibited if you would cure your patient or even control the disease. In my cases, the most common causes of recurrent attacks after a considerable period of freedom from them have been hard study, mental excitement, worry, and anxiety.

One patient, a bright girl in the high school, gave up school at my direction, but soon improved so much that I very unwisely consented to her return; whereupon she immediately set out to get to the head of her class, but soon suffered a relapse as the result.

Another, a woman of sixty, who had been a sufferer from the disease for forty years, had improved greatly, having been free from convulsions for more than two years, when she took courage from her long immunity and again entered the field of social life and church work. She met with a committee of ladies to prepare garments for the poor and make arrangements for the Christmas holidays; finally taking charge of the work herself. A series of convulsions was the direct result.

Both these cases belonged to the successful series, of which one characteristic is, that while under treatment convulsions seldom occur except as the result of some definite

exciting cause. When this is the case, there is every encouragement to continue the treatment with the certainty of benefiting and the hope of curing the patient. But when the paroxysms occur without any reference to the local conditions, then the outlook is much less hopeful.

Relax the "Spasm"

3. *The third indication, in all cases having a distinct aura, is to provide some quickly acting means of relaxing the vasomotor spasm, overcoming the muscular contraction, and preventing the occurrence of the convulsion, the same to be used at the earliest approach of the aura.*

The means most frequently resorted to for this purpose is the inhalation of the nitrite of amyl, preferably from broken perles, which latter may be carried in the pocket, and broken at the first indication of the oncoming of the epileptic paroxysm.

Only slightly less quick in its action, and more easily handled, is a granule of glonoin, which may be quickly dissolved in the mouth, and is as quickly absorbed, producing its characteristic relaxing effect, which is manifested by the flushing of the face and the quickening of the heart's action. The dose usually employed for this purpose is 1-100 of a grain. The effect of the nitroglycerin quickly passes away, but its action, or a similar one, may be prolonged by the simultaneous use of atropine or hyoscyamine. As shown by Nothnagel, however, "this remedy should only be tried where the patient becomes pale at the beginning, where indications of cerebral vascular spasm are present. It should not be administered if the color of the face is cyanotic from the outset." Furthermore, only a small proportion of cases present any distinct aura.

Lessen Central Irritability

4. *The fourth indication, in all cases where the symptoms are well marked and the epileptic condition is fully established, is to institute medical treatment for the purpose of lessening the irritability of the convulsion center.*

For this purpose a multitude of drugs have been and are still in use. The one remedy that has been recommended in every textbook on the practice of medicine

which has been published since the introduction of the drug into medical practice is the bromide of potassium or some form of the bromides. So nearly universal is its use at the present time that it is safe to calculate, when you are called to see an epileptic who has been previously treated, that he has taken some form of the bromides. Large doses are frequently administered for the purpose of controlling or modifying the convulsions, and this often ineffectually; while the secondary results are mental dullness, hebetude, and even stupor, with other results equally injurious; in some cases the paroxysms even being increased in severity and the general condition made worse.

A bromide is not a satisfactory remedy to use, at the best, and I have long been seeking for a better. I shall therefore consider mainly certain remedies which I have myself used with good results in the treatment of this disease.

Remember, in the first place, that epilepsy is generally regarded as an incurable disease; that improvement is in most instances the most that can be expected in long-standing cases; and that, if a substantial improvement can be secured, the patient should be content to continue the treatment indefinitely. Also remember that whenever any drug is to be taken for a long time, its incidental or by-effects become of great importance.

I shall speak mainly of *verbena hastata* and *solanum carolinense* as the dominant remedies, with *scutellaria laterifolia* and *cyripedium pubescens* as variants.

With these four remedies I believe much can be done in the line of lessening the irritability of the convulsion center.

Verbena Hastata and Indications for It

The most noticeable general action of *verbena* is its tonic effect on the nervous system, brightening up the patient's mental faculties and giving him a more cheerful aspect. This is in marked contrast to the action of the bromides, which produce dullness and hebetude. Its antispasmodic effect is probably secondary to its tonic action.

The cases and conditions in which it is specially indicated in epilepsy are the following:

1. Those cases in which the action of the bromides is distinctly unfavorable. It is probable that these are the anemic cases of Henle, in which the bromides are theoretically contraindicated. These cases are those which I have found most likely to be benefited by verberna.

2. Those recent cases in which the status epilepticus is not fully established, and also the comparatively mild ones, in which the convulsions are not extremely frequent or severe, nor the mental faculties greatly impaired. These are the cases which might naturally be looked upon as curable, and in these the results of verberna are likely to be favorable.

3. Cases of menstrual epilepsy, so called, in which the convulsive attacks are connected with the function of menstruation, either in its establishment or its periodical occurrence. In these cases verberna is considered to be especially useful.

4. Those cases which are variously described as visceral or peripheral, in which the convulsions are dependent upon some cause outside of the central nervous system. If this cause can be removed, verberna is effective.

5. Cases of petit-mal. My own experience does not confirm this indication, but it is so small in this regard as to be of little importance.

As to the method of using verberna in these cases, all my experience has been with the concentration, verbenin. This is furnished in tablets of 1-3 grain, each one of which is said to represent about 15 grains of the herb of verberna hastata.

So far as I have been able to ascertain, this is by far the best preparation obtainable. It does not possess the objectionable taste of the fluid extract, but is taken readily and continuously without objection. One of my patients has taken it regularly—with only a few months' interval—for nearly eight years, and will probably continue its use during her life. It never disturbs the stomach or produces any unpleasant symptoms in any doses which I have used—and I should not hesitate to give even larger ones if necessary to produce the desired effect.

With an adult, I usually begin with one tablet before each meal and, if the spasms

are apt to occur at night, also at bedtime. From this initial dose, I increase one tablet *each day*—not one each dose—until one of three things happens: Either, (1) the convulsions are controlled, at least measurably; or (2) signs of some unpleasant effect of the drug are manifest—a thing which in all my use of verbenin I have never noticed; or (3) it becomes evident that the remedy does not meet the indications, and the patient grows worse instead of better.

In the first instance, having found the dose which controls the convulsions, continue that dose, and if thereafter the convulsions recur, increase the dose as the severity of the symptoms may require. My usual maximum dose has been 6 tablets, or 2 grains, at each dose, and this may be given three or four times a day, as occasion requires; but I should have no hesitation in increasing that dose gradually and indefinitely until the convulsions were controlled or danger signals appeared.

In the second instance, the only thing would be to lessen the dose or discontinue it entirely; but verberna is not a poisonous drug, and very seldom will there be unpleasant symptoms from its use.

In the third instance, when it becomes evident that the patient is not helped or is made worse by the drug (and there are a few such cases), the only thing is to stop at once; and if you can hold the patient to try another remedy, by all means do so. The alternatives are usually bromides or solanine.

Solanum Carolinense and Indications for It

The essential therapeutic action of solanum carolinense is that of a powerful antispasmodic and nerve sedative, and it is of value chiefly in the various convulsive disorders, such as chorea, eclampsia, infantile and hysterical convulsions, and epilepsy.

It is a remedy of much greater power than verberna, and is adapted to a very different, and indeed almost an opposite class of cases. The following are its principal indications:

1. The plethoric cases of Henle, where the bromides have a beneficial effect, although they also produce some unpleasant incidental effects. Here solanum carolinense is almost always superior to the bromides, while lacking their minor disadvantages.

2. Cases of grand-mal of the idiopathic type, without hereditary taint, and where the disease has begun since the age of childhood. Here it is probably better than any other known remedy. (Thrush.)

3. It is perhaps of the next greatest value in hysteroepilepsy with marked convulsive seizures. (Thrush.)

4. In cases of well-advanced epilepsy of any type in which there is degeneration of the cerebral neuron, this drug will act specifically for a time, even better than the bromides; but it will finally be determined that the bromide salts will ultimately control the attacks better in these cases. (Thrush.)

5. In cases of cortical, or Jacksonian, epilepsy, a somewhat limited experience indicates that *solanum carolinense* is a remedy of great value.

With reference to the preparations and dosage: My own experience has been with two preparations only—the specific medicine of the eclectics and the alkaloidal granules.

Of the first of these, I am in the habit of beginning with, say, 5 drops three times a day, or if the attacks are most apt to occur at night, four times a day; the last being at bedtime, the others before meals, the medicine to be taken in a little water. This is to be increased gradually until the convulsions are controlled or the symptoms of drug sufficiency or physiologic action are observed. In my experience, the first of these results is usually secured from a dose of from 15 to 30 drops three or four times a day. In one case the attacks became worse instead of better, and this was accepted as a positive indication for discontinuing the drug.

Thrush maintains that in order to secure satisfactory results from this drug, it must be given in doses sufficient to affect the cortical centers, which is evidenced by a condition of drowsiness and stupor; and that this dosage must be continued through a period of several months—a year not being too short a time to elapse before its discontinuance.

It will be seen that, as compared with verberna, *solanum* is adapted to the severe cases, the long-continued ones, and those in

which the mental faculties have deteriorated. These are the cases difficult of cure, and even of amelioration. If reasonable improvement results, the remedy should be continued, the dosage being changed according to the effect produced.

If the alkaloid is used, the general effects are the same, as are the principles of dosage. It is difficult to formulate any rule as to the number of drops which corresponds to the alkaloidal granule of 1-67 grain. My observation would lead me to put it at about 5 drops; but other estimates vary widely. Anyway, if we follow the rule of dose for effect, no harm can be done, and the proper dose in any particular case will easily be determined.

Scutellarin and *Cypripedin* are mild but efficient nervines, something of the nature of valerian, but much pleasanter to take and without any disagreeable incidental effect. They are not powerful enough to be used by themselves as remedies in this disease, but are useful in cases characterized by general nervousness, as adjuncts to the more powerful remedies. Either one is given in doses of three to twelve granules—the larger dose to be taken once only, the smaller four times a day if necessary.

Persist in Treatment

5. *The fifth indication, in all advanced and severe cases in which favorable results are secured but a perfect cure is not obtained, is to continue proper medical treatment during life.*

One thing do not forget. Never consider a patient cured until he has been at least two years without any symptom of epilepsy. And if it is a case of long standing, even this does not mean a cure. It is a great deal easier to prevent convulsions for two years than for three—or four.

The fact is, a confirmed epileptic is never cured—if by cure you mean putting back where he was before the disease began. He will always be more or less susceptible to irritation of the reflex-center, and may, on the appearance of a sufficient cause (as overeating, unusual exertion, sexual excess, or any one of a thousand causes) suffer from a recurrence.

Hence it is wise, in all advanced and confirmed cases, to continue medical treatment

during life—always provided that sufficient relief is secured therefrom. My first patient thus treated had suffered from the disease for forty years when I undertook her case. She has been two and a half years at one time and three at another, with no recurrence; but she is not cured, and never will be. Nevertheless, she is so greatly benefited by the treatment that she is content to take verbenin tablets to the end of her life. And that is the best that can be done for her.

Not all patients are willing to do as this old lady, however. They want to be cured, and be done with it; if this cannot be done, they refuse to go on with the treatment. With such patients, nothing can be done. But the patient who is willing to put himself in the care of his physician, and stay there, should have the benefit of the best that that physician can do for him, including medical treatment and constant oversight and watchful care.

Mistakes

II. The Case of "Neuralgia"

By CURRAN POPE, M. D., Louisville, Kentucky

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Medical Superintendent, The Pope Sanitarium

EDITORIAL NOTE.—This paper will be followed by others on the same general topic, all exceedingly practical and helpful, and written in the entertaining style of which Dr. Pope is a master. The physician who reads these papers carefully will avoid some of the common pitfalls in diagnosis, and will be able to treat many a case with better success.

IN dealing with some of the more or less concrete examples of easily preventable mistakes that have come under my personal knowledge in recent years, it must be understood that the object of this series of papers is, not to criticize my medical brethren, but simply to call attention to the fact that, had a careful investigation been made by those methods of diagnosis that are easily accessible, the mistake would not have been made. No cases have been selected that involve nice distinctions; on the contrary, *simple* (?) cases have been chosen, that is to say, cases that would have been *very clear* had any real effort been made to search for the conditions present.

An "Old Rheumatic Trouble"

The following experience may prove of interest:

A woman, aged 38, married, mother of three healthy children, called to see me, giving the following history: Has been fairly healthy all her life; had the usual (?) exanthemata and children's diseases; at the age of 12, she had a severe attack of

acute articular rheumatism with fever, swollen joints, etc., being confined to bed for six weeks and making a slow and tedious convalescence. Was sent away to a girls' school at the age of 15, and during her second college year, at 16, she had another severe rheumatic attack lasting several months. Was brought home on a "stretcher." Gradually regained her health, and ever since has been careful of self in order to avoid rheumatism.

Her family is markedly rheumatic. Her father has gout, her mother "chronic rheumatism," and her two brothers have both had genuine acute inflammatory rheumatism, followed, in one instance, by endocarditis, and in the other, by chorea, for which latter malady I treated him. A sister so far has escaped.

The patient in question has a good appetite, good digestion, but is constipated; this she regulates with laxatives. She is sturdy-looking, of good flesh, and usually very active. Her present illness commenced, about two weeks ago, with an attack of her "old rheumatic trouble." It came on

gradually as an aching on the left side, as she said, "in the lower ribs." After several days the pain suddenly became intense. She drove down to her family physician's office, who heard her story, examined her tongue, felt the pulse, and stated that it was her "old trouble," in which diagnosis she agreed. He prescribed a salicylate, and dismissed her with the instruction to keep quiet and apply heat to the painful spot. Several days later he again saw her, this time at her residence, and he changed his diagnosis to "intercostal neuralgia," and prescribed anew. Growing worse, she concluded she would see a "specialist." In this way I came into contact with the case.

It may here be noted that no physical examination was made during the entire course of treatment.

After learning the foregoing facts, besides many others it is needless to mention, being foreign to the purpose of this paper, I proceeded to make a careful and complete physical examination.

Herpes Zoster with Acidemia

The first thing discovered was a beautiful (?) nay, typical eruption of herpes zoster, together with the other clinical symptoms that made a diagnosis of neuritis unequivocal. In addition, well-marked endocarditis was present. The urine was hyperacid (90 Harrower); specific gravity 1024; loaded with oxalate and uric-acid crystals; and a trace of albumen. The presence of a few cylindroids, renal epithelium and an occasional hyaline cast presented a suggestive picture.

The woman was placed upon treatment both general and local. Free purgation with a mercurial (blue mass) followed by a laxative saline, and each morning by subsequent doses, proved very helpful. To combat the hyperacidity and relieve the kidney irritation, as well as influence metabolism generally, she was placed upon full doses of sodoxylin, with free drinking of water. At the same time the galvanic and high-frequency currents were applied locally to the inflamed nerves. During the interim between these treatments a stiff salve of zinc oxide was applied. In a very short time relief was given, followed by a sub-

sidence of the eruption. As soon as possible she was given hydrotherapy, incandescent electric light baths, horizontal rain, circular or needle baths, douches, etc., and, in addition, massage and general electrical treatment, including those mentioned above, and the wave current to the spine. She left the sanatorium in excellent health.

"Nervousness and Neuralgia"

Here is another convincing illustration:

School teacher, aged 30, single, overworked. Has been compelled, through financial troubles, not alone to perform her heavy work in the public schools, but has supplemented her income by private teaching in the afternoons and evenings. She was able to "hold up" until she had cleared her financial skirts of the embarrassment that entangled her; then, however, she began to feel the strain.

She became nervous, restless and irritable, had sleepless nights, varied by occasional terrific nightmares. She was gradually and steadily growing weaker and unable to perform her work. She first gave up her night teaching, then her afternoon teaching, and, on her own initiative, began to take long walks, but these fatigued her more and seemed to make her more irritable and nervous. She began to feel "pains around her heart" that really frightened her. She fought going to a doctor because "she had saved up enough over and above the debts she had paid to give her a vacation trip to Europe," and she did not wish to "divide with doctors." This was her undoing.

Her family physician saw her, and after listening to her tale of woe, he listened to her heart (through a thick dress, underwear, corsets, and all accoutrement). He thereupon pronounced her heart normal, saying that the pains were "purely nervous; that her heart was as sound as a nut; that the pain was neuralgic" (?). This was true in so far as it related to her heart, for it was *good*, both organically and culturally. Medication along "purely nervous and neuralgic" lines failing, the lady, after two months' trial, was brought to me, by a former patient, for examination and treatment.

After eliciting the facts recounted, it turned out that all of her family were of

a psychopathic nervous type; that she had always been nervous and high-strung; had had chorea as a child; nearly always suffered from digestive disturbances of nervous origin.

It is needless to go into the details of the many symptoms discovered; of the relief of her nervous symptoms, of the correction of her psychic life and nightmares by the psychoanalytic method of Freud, as these do not bear on the case in point, to wit, the failure to realize the true state of physically plain conditions through overlooking the necessity to examine patients physically in the proper manner.

Another Case of Neuritis

Here, as in the other case, we had to deal with a neuritis. There had been an eruption

of "shingles" during the acute stage of the disease, some few vesicles remained as well as many pigmented spots that had formerly been vesicles.

The proper local and general measures adopted in the first case described soon relieved the "pain in the heart," while general physical and psychoanalytic treatment removed the general psychopathic condition. Several years have elapsed, but the patient remains well, better in body, better in mind, and able to do as much, if not more, mental work as in her palmiest days. The incubus, from which she had suffered for years, is simply a phantasm of the past, as it was dependent on the factors detailed by Freud and removed permanently by the re-education that resulted from the treatment.

Fads and Follies of Twentieth-Century Medical Practice*

By EDWARD H. EGBERT, M. D., Washington, D. C.

WE consider that by the term "medical practice" is meant the use of any method of treatment, or the giving of any advice, for the purpose of preventing, alleviating or curing any symptom or disease, by any person or persons who either directly or indirectly use such efforts as a means of financial gain.

Were legislative enactment made on the basis of such a definition the present state of affairs would not exist, but because of the ignorance of our legislators, and because of the efforts made on the part of patent-medicine interests and fake practitioners, the scientific physician, who has spent at least eight years of the best part of his life in seeking to meet the educational requirements enacted by law, is harassed at every turn in his efforts to give the public the advantage of his laboriously acquired fund of knowledge. On the other hand, the faker and the faddist are unhampered by legal restrictions.

I believe the time has come when we can no longer ignore the indignities with which we are assailed, and that a painstaking investigation of this social and professional problem must be made in order to come to a realization of the exact status of affairs.

Having once arrived at a decision as to the etiology, preventive measures may be taken, and with the diagnosis cleared up, active treatment *must* be instituted. I say "must," for I wish to emphasize the necessity for a prompt and active campaign against the influences which are thoroughly destroying the confidence of a large percentage of the public in scientific medical attainment.

Contrary to literary custom, but complying with clinical practice, we will consider first the diagnosis and then the etiology.

What is the matter with the doctors, and what is the matter with the public?

First of all ourselves. Time does not permit more than a mere word or two upon the several phases of the poor policy on the part of the profession at large which contribute to the ill repute with which we are

*Read before the Medical and Surgical Society, District of Columbia, January 23, 1911.

being assailed, but mention of some of them will provide food for thought and discussion.

Crowding the Ranks

First, as to overcrowding. There can be no doubt but that the profession is crowded and that the supply is considerably in excess of the demand. As a result, many are driven to unethical deeds merely through the law of self-preservation. The average income of a physician in this country is less than one thousand dollars a year; some estimate it as low as eight hundred. A physician, if he has any hope of bettering his practice, must live at at least double this income. He naturally feels that after an extensive preparatory course he is entitled to at least as good a living as a skilled mechanic, consequently he is very apt to become deeply indebted.

Opportunity is afforded, say, to perform a difficult operation. He knows of men better qualified for such work within reach and who are earning from fifty to one hundred dollars to his one, but he does not call them. He needs the money, and he does the operation, with the chances that discredit is heaped upon, not only the offender, but upon the profession at large, because of this man's failure.

A certain druggist offers a percentage on his prescriptions. It is easy money and he needs it badly, but this and a score of other means brings into disrepute, not only the offender, but also those physicians who are above grafting.

Overcrowding is especially the case here in the District of Columbia, with one registered physician to every 270 of the inhabitants, one-third of whom are colored, and no small percentage of whom are receiving free treatment at one of the seventeen dispensaries or are attended by a man engaged in contract or lodge practice.

However, with the larger average of one doctor to every 480 inhabitants throughout the country the conditions are not as bad as they would seem at first sight when compared with the statistics of some of the European countries, where the ratio is about one to 1500 people. We have not so many distressingly poor as are found among the great

peasant class of Europe, and the average American citizens can better afford professional advice, hence will consult the doctor more frequently than will the average European.

Too Many Colleges and Irrational Curricula Are to Blame

It is my opinion, however, that the curse of the profession is not so much quantity as it is quality. There are too many medical schools, and in the effort of some of them to survive financial strain, men have been and are still being recruited for matriculation and finally graduated who make undesirable physicians, and are a blot on the record of their Alma Mater.

Whom have we to blame for this condition of affairs? Who have flooded the market, and added incompetents to our ranks? Doctors of Medicine!

Recent agitation has done much to relieve us of the malignant diploma mills, and the merging of two schools into one is a more frequent occurrence now than the founding of a new college; but the best men graduated from the best schools are none too well equipped to combat disease and quackery.

Too much time, for the four-years' course, is spent in studying nonessentials, and too little is given to practical diagnostic and therapeutic methods. Oh, the hours we spent fooling around a laboratory, drawing pictures of an embryo chick, dissecting of an odorous fish, making tracings of a frog's heart beats on a revolving drum, ascertaining whether a certain solution contains zinc, lead or some other metal, or sitting on a hard straight-backed seat in the surgical amphitheater enjoying nothing more interesting or profitable than a bird's-eye view of a surgeon and his assistants! Would not the young doctor, who is called, frequently in an emergency, to treat desperately sick babies, cases of poisoning, hemorrhage, dislocation, fracture, accidental wounds, and burns, or to advise hypochondriacs, neurotics, neurasthenics, and other chronics who are anxious to "try the new doctor," be better prepared to serve his fellow man, and reflect honor upon his profession, if more time had been spent in preparing him to meet emergencies and to treat chronic diseases?

'There is time enough in the four-years' course to give every student a good working knowledge of dietetics, psychotherapy, hydrotherapy, massage, thermotherapy, and a more complete mastery of medicinal therapy and physical diagnosis than has been the custom. Would it not be well, also, to give a few lectures on medical ethics and medical economics, to teach him how to uphold the dignity of his calling, and how to fight ignorance, superstition and quackery?

I do not favor an exclusion of the independent medical college, although it is a fact that the unendowed schools have been the greatest offenders in graduating men unsuitable from a standpoint of personality and preliminary education. I believe that the better class of them should merge and continue their efforts, for their teaching, in the main, is of an intensely practical nature, and many of our best clinicians are the output of these schools.

The tendency of the heavily endowed schools is to become ultra scientific, preparing men for special work, research work and the field of medical instruction rather than for general bed-side practice. With both classes of schools side by side, we shall have a better-balanced profession. The public needs the practical clinician; the profession needs scientific research workers.

The Fee-Splitting Controversy

Much has been said about the commercializing of the profession, and in this respect I will take time to speak of nothing but the fee-splitting question.

I wish to go on record as being unalterably opposed to such a proposition, for if there is anything which will tend to commercialize the profession and be the source of ill feeling and quarrels among its members, belittling us in the estimation of the laity, it would be the practice of splitting fees. The tendency would be for the least accomplished to offer the largest percentage of rake-off, the better man to give less, and the best to give nothing, because their time is all consumed with cases which would come to them in spite of being urged by their physicians to seek someone else. Is surgeon A going to split his fee and feel a friendly attitude toward his brother physician Dr. B

when the patient tells him that he has more confidence in his, A's, ability, in spite of the fact that Dr. B said that he was highly overestimated, and that Dr. C was really a better surgeon?

It amounts to this: If specialists can afford to split fees, and general practitioners can afford to accept a percentage, then the specialist feels that he can afford to operate for less, while the general practitioner feels that he is not sufficiently remunerated. If the patient can afford to pay \$200 for an operation, and the surgeon feels that he can afford to give the physician 25 percent of that amount, then let us revise our fee-table.

I have long felt that the general practitioners would do well to follow the specialists' tactics and charge according to the service rendered and the skill manifested. Charge less for routine work and more for work involving greater skill and greater responsibility.

Take for instance a case of extrauterine pregnancy. Which would be better, for the surgeon to operate for \$200 and then slip the family physician \$50, or for him to say: "My fee for the operation is \$150, but had not your family physician showed excellent skill and judgment in making a diagnosis and advising surgery, instead of fooling along with useless and dangerous palliative measures, you probably would have met with fatal hemorrhage. Appreciation for such valuable service can be shown by paying your doctor \$50, instead of the usual fee for the visit"? I do not mean by this that surgeons should act as a collecting agency for their physician friends, but they can do much toward gaining the confidence of the public in the ability of the general practitioner, be helping them to appreciate skill, when it is shown, than by underhandedly "divying up" with the physician.

Fraternal Ethics Furnishes the Answer

What is the solution of this problem? It is simply a question of fraternal ethics. The man who signs the diploma for ignoramus, for an unscholarly or ungentlemanly medical student, is a traitor to his profession. It is responsibility enough to assume charge of a sick individual. How much greater, then, is not the responsibility

incurred in sanctioning a degree of Doctor of Medicine for a man who will eventually treat thousands, unobserved by the eyes of the faculty?

The physician who encourages an ill-fit man to take up the study of medicine is an accessory to the crime. The man who uses unfair means to build his practice, such as surreptitious newspaper advertising, verbally "hot-airing" his patients and acquaintances, knifing his brother physicians, is infinitely lower than a straight-forward advertising quack. They are not only quacks themselves, but are encouraging quackery and commercialism, and should be severely disciplined by the honest members of the professional body. I make a plea for a closer adherence to ethics, in its broadest sense.

And Now the Public

Now, then, what is the matter with the public? Broadly speaking, inadequate education in matters concerning health and in subjects which tend to stimulate powers of logical reasoning.

With the better knowledge concerning hygiene, physiology, and pathology, and with better powers of logical reasoning, they would not so easily be victimized by the quack faker and faddist. They would not be led away in hysterical flights of optimism that denies the existence of disease, matter, and evil; they could not be led to believe that all diseases are caused merely by mental attitude and that every form of sickness is expelled through the power of suggestion, albeit they may call it by some other name.

The One-Idea Faker

The man who claims that "all diseases are due to definite lesions consisting of bony displacements," and that "treatment and cure must necessarily consist in and follow the removal of the cause," is likewise a faker. And so we might enumerate all the "isms, isms, and pathys" naming but one cause and one treatment for all disease. True, many of these are themselves victims of illogic, and are sincere and enthusiastic in their belief, but they are fakers nevertheless. Anyone who says that all diseases can be cured by medicine, or by massage, or manipulation, or fresh air, or going barefoot, or

what-not, or denying existence of pains, is wittingly or unwittingly a faker.

Osteopathy and Mechanotherapy

Some say that, for instance, osteopaths do not claim to combat all diseases. Listen: "It [osteopathy] must have proper legal regulation; its practitioners must be able to handle all diseases, and the public must be educated to acknowledge that it is a complete system." (Dufur, "A Broader Education for Osteopathic Physicians," I. A. O. A., Oct. 1910.)

"Osteopathy is a *system of healing, not alone a method of treatment*; it is a *system or school* because it has a *distinctive and embracing etiology, diagnosis, and therapy*." (McConnell, "The Osteopathic Concept," I. A. O. A. Vol. X, No. 4.)

"What is osteopathy? The question is still asked by many, despite the fact that legions of people everywhere now depend entirely upon its ministrations in sickness; despite the fact that legislators in nearly all the states have specially legalized it; and despite the fact that approximately 4000 trained physicians are today practising the new healing system." ("The Right Way," Dec. 1909. Vol. XI, No. 4.)

"Osteopathy became a school of practice in 1892. It was discovered twenty years previous by Dr. A. T. Still. The first class graduated in 1894. At present there are eight colleges, over 1,500 students, and more than 5,000 practitioners." (Teall, "The Institutions and Organizations of the Profession," I. A. O. A. Vol. X, No. 4.)

What is mechanotherapy? Here is some of the information I received from the American College of Mechanotherapy:

"For \$25.00 cash, or \$27.00 in nine installments, you will receive the charts, books, special instruction, and a *beautiful diploma* giving you the degree of "Doctor of Mechanotherapy." "We have over 2,000 graduates." Are these "graduates" in any way successful in exploiting the sick? Scores of them testify somewhat as follows (From personal communication):

"I am making \$10 to \$15 a day and work seven days a week. I am busy all the time and am sending patients to Dr. W. R. Skellenger, M. T., and the sanitarium, so

you see what a lot I have to do. May God bless our work in the healing of the sick is my prayer. Yours in the Master's work, Dr. W. F. Leslie, M. T. D."

"The Mechanotherapy student has, at the end of each treatment, \$2.00 cash in hand, and all profit."

"It is just as easy for an M. T. D. to get \$5.00 as it is for an M. D. to get \$2.50 for a treatment." P. W. Dymont, M. D.

"I am doing a good business and getting a good practice in mechanotherapy, which goes good in my profession of optometry." Sam Levy, O. D., M. T. D.

"The man who induced me to take a course in mechanotherapy was formerly a blacksmith with an ordinary education; today he is practising mechanotherapy with an average income of \$15.00 a day." M. S. McClure, M. T. D.

"I now get patients from four different states, and make as high as \$25 to \$30 a day. I feel that in mechanotherapy there is financial success for all." E. L. Stout, M. T. D.

But what is mechanotherapy?

"The mechanotherapist is a drugless physician and bloodless surgeon. His medicines are not drugs, but scientific combinations of food, circumstance, idea, water and motion." From advertisement in *The Progress Magazine*.

"It will be seen at a glance how fallacious it would be to take a two-years' resident course when you can learn more from these volumes in two months than a lot of long-winded so-called professors can teach you in a year." (Personal communication.)

Did time permit I could inflict you with such testimonials for the rest of the night, showing you the utter folly of half a dozen other so-called "systems of practice."

"New-Thought" in Foot Ball!

I can't resist the temptation to quote a few lines taken at random from various periodicals in my possession. On page 15 of *The Nautilus* for January, 1911, is described the effect of new-thought in playing the game of football.

"A few days after, Harvard played Yale at the Yale grounds. Haughton (coach) instructed Harvard to send 'three long con-

fidence thoughts, and three times three success vibrations to the players.'"

Bernarr McFadden gives the following excellent (!) advice for the treatment of diphtheria: "Do not encourage the child to stay in bed, and as for draughts, the patient should actually sleep in a draught as far as possible. Further, drugs are not of the slightest use, and antitoxin is dangerous and is not in any case necessary. Diphtheria is not a dangerous disease unless it is made so by the method of treatment that is employed. As a rule the severe symptoms of the complaint will disappear in a few days if you treat it in accordance with commonsense methods." (*Physical Culture*.)

This is enough to give you some idea of the brilliant advice that is being greedily read, and I regret to say, is mightily influencing the American public.

Do you know, gentlemen, that there are published in this country over eighty periodicals, to say nothing of the countless books, whose absolute purpose, or incidental result, is to run adverse to everything sound concerning scientific matters, concerning health, and that the writers of such pernicious teachings are more and more frequently breaking into journals of the better class?

For instance: "America's Medical Hell," *Current Literature*, January 1911; and the literature propagated by the League for Medical Freedom.

The League for Medical Freedom

What is this "League for Medical Freedom?" Surely, "politics makes strange bed-fellows," for in this league, working in pleasant harmony, we find the Christian scientists and new-thoughtists who believe in no evil, and osteopaths and backbone fakers who would have us think that all diseases result from maladjustments of bony and cartilaginous structures, homeopaths with their "like cures like," and the patent-medicine industry who believe in unmercifully drugging everybody for everything!

This league is 150,000 strong, with a fortune at its disposal. It is headed by B. O. Fowler, editor of *The Arena*, and a well-known literary light. An idea of this man's knowledge of scientific medicine

which he so severely criticises, may be gained by reading his series of articles appearing in *The Arena* from March until June, 1909, entitled, "Medical Explanation of Christian-Science Cures, Considered in the Light of Typical Cases." The trump case he cites, choosing it "because of the supposed incurable character of the disease, and the fact that from the viewpoint of materia medica (sic!) the question of diagnosis leaves nothing to be desired, is a case of blastomycosis." Schamberg, Hyde, Montgomery, Gilchrist, and other eminent dermatologists emphatically state that blastomycosis renders a good prognosis and shows remarkable tendency to spontaneous cure.

This "League for Medical Freedom" was established for the sole purpose of defeating the Mann Bill now before the United States Congress. In the prospectus of this league, the learned Mr. Fowler states that "the A. M. A. has long been aggressively favoring legislation and restrictive laws that would deny the individual citizens the practitioner of his choice, if that practitioner did not conform to the creeds, dogmas, and regulations of those seeking protection." The logic and clearness of this statement is in exact keeping with the reasoning powers of gentlemen of this ilk.

What Have These Special-Dogmatists Done for Medical Science?

What are the creeds, dogmas, and regulations of those seeking protection? Does this mean that those seeking medical advice have creeds, dogmas and regulations, or that the American Medical Association, representing the body of regular physicians, are afflicted with such impedimenta? If I am not mistaken, the regular physician is the only one whose judgment is not limited by any creed, dogma or regulation. He is urged to use all powers supplied by God-given brains to inquire into the cause and prevention of disease, and is unhampered by any orthodox rule in his treatment of disease.

This league has convinced some legislators that the establishment of a National Board of Health is a conspiracy on the part of the regular profession to establish a medical trust, through restrictive laws. If such a

department should be established, homeopaths, osteopaths, and what not will clamor for positions of authority in this government service.

If any of these followers of sectarian medicine can prove that they have ever invented an instrument of precision, isolated a disease-causing germ, added one whit to our knowledge of anatomy, physiology, hygiene, sanitation or preventive medicine, or have made a single valuable discovery in the field of diagnosis or therapeutics or the thousands of other scientific items that go to make up the great campaign for health and welfare of mankind, I for one would urge representation of that medical sect on such a medical advisory board.

Our friend Satterthwaite of New York has advocated the recognition of sectarian medicine in our medical societies, believing that good would follow the discussion of their papers. Relaxation and considerable amusement might be afforded by such a procedure, I have no doubt. But I do not think we should profit especially by listening to "The Technic of Absent Treatment for Transverse Presentation," "Osteopathic Management of Diphtheria," "Mechano-therapeutic Treatment for Myopia," "Christian Science Treatment for Stricture of the Urethra," "Homeopathic Cure of Eclampsia," "The Influence of Exercise in Complete Tears of the Perineum," "Chiropractic Treatment of Delirium Tremens," "The Influence of New-Thought on the Child-Labor Question," *et cetera ad nauseam*. I think we can get along without these.

What Do to Combat These Sinister Influences?

But, seriously speaking, how are we to combat these damnable influences so injurious to scientific progress and so seriously affecting the laity? Education is the only solution of the problem. More practical education for physician, as previously pointed out, and drastic means to offset the pernicious influences of medical vultures and asinine meddlers.

We have remained silent to these indignities too long. Dignified silence is no longer a virtue, but a curse. All of these freak systems have their modicum of truth

as a basis, but the financial success they attain in treating the gullible for all sorts of conditions casts opprobrium upon scientific medical practitioners. Let us investigate thoroughly the advantages of all, explain their limitations and destroy the incentive of the public to consult the fakers. As Jacobson says (*J. A. M. A.*, Jan. 14, 1911): "Legislation has done no more than recognized the systems, and given representation to them on our examining boards. This is not a cure nor yet a palliative, indeed it safeguards, wet-nurses and perpetuates these systems."

Are the public under any obligation to support a profession who unselfishly seek to prevent the various diseases, the treatment for which renders them material gain; the profession which holds no patents, inventions or secrets, but whose members gladly give the benefit of their discoveries to mankind, who are doing more at the cost of actual personal discomfort, physical and mental energy, for charity than any class of people engaged in philanthropic pursuit? The medical profession has done and is doing more for the betterment of mankind, and is less appreciated for its efforts than any other class of workers in the field of human endeavor.

The military man who directs a campaign, at the cost of thousands of lives, hundreds of thousands of sick and wounded, and millions of dollars, receives the applause of the world. He is hero-worshipped for centuries. Learned people can discourse at length on the life and achievements of such monuments of selfishness as Alexander, Caesar and Napoleon, but what do they know of Jenner Pasteur, Behring, O'Dwyer, Reed, Carroll or Ehrlich? Who was the real hero of the recent war? Dewey or Carroll? What has the nation done for Major Carroll's widow and children?

If our children were to be taught something of the real achievements of science for the preservation of life and health, I doubt if in after years ignorant fakers could convince them that vaccination is a humbug, antitoxin "unnecessary and dangerous," that filth, mosquitoes, flies and fleas have nothing to do with disease, because "all is mind and mind is all."

How many deaths are due to hydrophobia as compared with quackery? Yet, by legal measures, dogs are muzzled. Could not some action be taken to muzzle the ignorant fakers who are giving such pernicious, death-dealing advice?

Try a Campaign of Publicity

Patent-medicine interests are spending hundreds of thousands of dollars in newspaper advertising, sending out almanacs and what not to get their wares on the market. I believe it not below the dignity of the American Medical Association to use some means of reaching the masses in somewhat like manner. Pamphlets for free distribution on such subjects as: What scientific medicine has accomplished for mankind; why physicians do not advertise; the methods of quack practitioners, composition of the average patent-medicine tonic, and so on. Many vital questions may be brought to the attention of the public by such missionary tracts.

Something in this line has already been undertaken by the Association, but I believe that the employment of these measures should become more general. Certainly nothing can be done through newspapers, for they are hand in glove with the patent-medicine and quack interests because of the income from advertising space.

In giving vent to our wrath against extra-professional grafters, we must not forget the wolves parading in sheep's clothing in our midst. The hypocrites who are secretly hobnobbing with newspaper reporters and using all the other underhanded means of gaining advantage over their brother physician should be handled without hesitation. The man who is a party to the graduation of an ignoramus into our ranks should be promptly kicked out of medical society.

I believe that we may take a lesson from the methods of the Anti-Saloon League. In a few years, by fighting fire with fire, namely, engaging actively in politics, it has closed more saloons than the W. C. T. U. could close in a century. The time has come for action, and so let us not be negligent in the performance of our solemn duty, to our profession, to our country, and to our Creator.

The Radical Cure Of The Social Evil

The Dangers of Popular Instruction on Sexual Topics

By A. L. BENEDICT, M. D., Buffalo, New York

WHILE the writer does not wish to oppose the movement toward popular instruction in sexual matters, it seems worth while to point out certain dangers in this policy, as well as the fact that instruction is not going to effect a radical cure of the sexual evil.

The Child's Precocious Knowledge of Sex Matters

In the first place, the somewhat cynical view may be advanced that the average child is already pretty well versed in sexual hygiene, physiology and pathology. Marked differences are, of course, to be expected, according to locality, social standing, degree of segregation during childhood, and so on, so that no general statement can be made without danger of contraversion. For this reason, no apology will be made for alluding to personal experience.

The "crowd" or "gang," of which the writer was one, ranging in age from five to ten, and representing three or four public schools and one or two rather fashionable private schools, in a city then of about a hundred thousand population, was fairly well informed in sexual matters from a number of sources, mostly untraceable, but certainly not due to anything approaching the formal instruction now advocated.

Without going into unnecessary and possibly objectionable details, it may be said that our childish lore included about all that the lay adult knows of such matters, and more than it is absolutely essential that so young children should know with regard to hygiene and morals. With certain exceptions, also, quite analogous to those in adult society, our standards were quite high. For instance, the solitary vice was warned against, we knew enough to avoid grown persons of low character, and, as an organization, we punished both physically and by ostracism the seducers, aged five and six years, respectively, of a girl of less than four.

So far as can be judged, sexual information is pretty generally diffused among children, say, after the age of ten in boys and of twelve in girls. It is obvious, then, that, to secure certain of its advantages, any scheme of general instruction of the youth must anticipate the average age of puberty by at least a year, unless it is found to be feasible to ascertain the age of puberty in individual cases, in schools and similar aggregations of children.

The Dangers of Formal Instruction

It seems, to the writer at least, questionable whether it is desirable to give instruction by lectures, pamphlets, and the like, at such an age. At any rate, it should be clearly understood that, to do so, cannot fail, in the average instance, to interfere with the desires of parents who wish to keep their children in a state of innocence, and that it will inevitably result in the handing down of information to younger and younger children. Moreover, if the scheme of formal instruction should prove to be harmful by actual experiment, it will be impossible to discontinue its effects immediately, as the information given will persist, in more or less accurate form, for at least a decade, perhaps for a generation or more.

These considerations are offered, not in the sense of opposition, but because they should be seriously and widely studied before attempting to put any plan of instruction into execution. Meantime, the writer cannot refrain from holding out for approval or disapproval the less formal plan of individual observation and of instruction, according to the necessities of the case, by parents, physicians, clergymen, teachers, etc., who may well associate themselves for the sake of gaining accurate information and in order to cover the ground as completely and consistently as possible.

Another deduction from the premise that the youth is already pretty thoroughly conversant with sexual matters ought not to

escape us. Any system of lectures or pamphlets, to receive due respect and to produce a good result, instead of merely suggesting vice, must be accurate and must arouse interest by increasing the knowledge already possessed.

It is easy enough to frighten an audience by exaggerated statements and to overcome the exceptional boy or girl who has been kept in a state of innocence until adolescence is reached, or to do good in the exceptional instance in which unisexual or bisexual vices have been practised without full realization of their physical and moral harm. But we must think of the ultimate effect on the average, intelligent, already pretty-well informed and curious boy and girl.

Personal Safety, Not Morality, Will Become Aim

No matter what the tone of the lecture or pamphlet, however much it dwells on moral issues, however fully it deals with the physical terrors of venereal disease and pregnancy, and however it may ignore the fact that these terrors are often escaped by good luck and avoided by precautionary measures, it must be seriously considered that, in a large number of instances, the ultimate effect of instruction will be *to draw lines of safety, not of morality*, and to institute a search for a means of *gratifying passion without suffering the consequences*.

The writer would emphasize the belief that ignorance or information of sexual details has very little to do with morality, in either sense. General conceptions of propriety are practically inevitable, in a civilized state of society, among boys and girls who are *compos mentis*. There may be cited the case of syphilis of the Drs. McDade (*AM. JOUR. CLIN. MED.*, Jan., 1911, p. 110), " . . . he went to visit in a farmer's family for a few days. An ignorant and innocent girl of eighteen years was taken advantage of, during this time. . . . The girl claimed that her parents never had cautioned her to be careful with boys and men or taught her the danger and sinfulness of fornication. She said her minister never, to her knowledge, preached a sermon warning young people of the dangers of indulgence before marriage." Without any intention of

defending the man or of assenting to the dictum of certain ultramoral persons that sexual indulgence ought always to be punished with venereal disease, consider for a moment the insincerity of the girl herself, and the effect of sexual instruction on such a being!

General Conceptions of Morality Are Understood

General principles of right and wrong are common property. If that particular girl is an idiot, she would not have been amenable to instruction, but should have been specially guarded, preferably in an institution where the sexes are segregated and all inmates closely watched. If in the possession of normal faculties, a girl fairly mature who would give herself up to a man in the course of a few days' visit could undoubtedly gain considerable valuable information from a course of lectures. If the man in question presented fairly marked signs of syphilis, she would probably have escaped this particular infection and might have developed into a skilful amateur, but as to "morals," or even permanent negatively good conduct, we have very grave doubts.

There is no question but that our society is very far from being what it ought to be. Whether it is worse than in the past, it is practically impossible to say. The natural tendency is to think that matters are getting worse, but as we grow older, we not only learn of more instances of immorality but the reserve and timidity which often restrain the youth grow less, and, especially in the case of a physician, acquaintances as well as patients are more likely to lay bare an evil private life. At any rate, an optimistic view is difficult for one who does not deliberately hide his face in the sand.

Reflections on Seduction and Prostitution

It is not the purpose of the present paper to deal with the subject of prostitution. Indeed, an observer who is at all cynical is inclined to ridicule the idea of a white-slave trade and to wonder how houses of prostitution can exist.

In several particulars, the writer has observed conditions so different from those ordinarily described by moralists that it

seems worth while to make the following observations.

The subject of the verb "seduce" is not necessarily of masculine gender. This fact should be understood, not in derogation of womanhood, but because, in endeavoring to treat a diseased condition, we must base our remedy on actual conditions. Two of the worst rakes in the medical profession that we have personally known were started on their career by their female teachers while they yet were little boys.

The writer holds that the purity of childhood should be equally sacred to society and equally protected by the law, without regard to sex. Even if this view is not accepted, the two instances mentioned illustrate the wisdom of protecting the little boy, for the sake of the ultimate indirect effect on female virtue. At a conservative estimate, these two men, precociously started on a sexual life, have collected their indebtedness from the opposite sex a hundredfold.

The seducer by no means is always unwilling to marry his victim. In many instances, the opposite is the case, and in many more, neither party covets marriage.

Church organizations have, in the writer's experience, been responsible for a large number of social disasters.

Pious men are, so far as girls of good intentions are concerned, more dangerous than men of the world. In the first place, the latter are more blasé and less likely to be carried away by accumulated passion, less subject to personal attraction, and more apt to realize just what a career of vice means to a girl. In the second place, the pious man is apt to draw a sharp line between right and wrong, while the man of the world recognizes not only black and white but various shades of gray, and he may commit a wrong act, while respecting principles of honor and what he is apt, diplomatically, to characterize as "the rules of the game."

Young Women Should Be Chaperoned

Without in any way casting doubt on the ability of the average girl to take care of herself, the writer is more and more inclined to favor a reasonable system of chaperonage. Even more important than a literal chaperonage is a sufficient mingling of adult and

adolescent society, so that boys and girls shall regard their parents, mature relatives and friends, not as spies and custodians, but as fellows; shall acquire proper social standards by which to gauge their young acquaintances, and shall regard social affairs as something broader than opportunities for mating, while, on the other hand, parents shall have an opportunity to judge of the character of their children's associates.

Notwithstanding what has been said in favor of chaperonage, a single couple is better than a party of four. A wise woman, who brought up five girls to be all they should be, went further than this, saying that she would rather have one of her girls out in the evening alone with a young man whom she knew than with a good many of the young married women.

The writer can not help feeling that morality, of any kind, cannot be enforced by fear of punishment. Many persons become sexually immoral simply because they have no interests beyond their appetites and physical comfort. On the other hand, it is surprising how often brain-workers display, not only marked sexual vigor, but laxity of conduct. Thus, while occupation with and interest in higher things undoubtedly conduces to moral conduct, the sheet-anchor of good behavior is a genuine moral character.

At the risk of seeming old-fashioned, it may be observed that a plausible excuse for violating any moral principle, for selfish pleasure, may readily be invented unless morality is directly grounded on religion.

There can be no question but that a girl who amuses herself with men's caresses and who expects to be engaged three or four times before she is married is safeguarded to some extent by losing her innocence—or shall we say, ignorance? Likewise, there is no question but that many young persons of both sexes are benefited, both as to actions and general intentions, by instruction in sexual matters. But innocence has an old-fashioned charm and appeals to the chivalry of any man but a brute, and the really chaste girl can get along very well with an exceedingly meagre knowledge of obstetrics, gynecology and venereal diseases, but having a clear conception of general principles of propriety.

The Chemistry of the Alkaloids*

By PROF. A. A. BENNETT, Ames, Iowa

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EDITORIAL NOTE.—Because this article gives a clear and concise view of the various plant principles, including glucosides, plant toxins, etc., as well as the true alkaloids, we have "borrowed" it from Prof. Pammel's "Manual of Poisonous Plants," of which it forms one chapter.

THE term "alkaloid" is a relic of an early method of nomenclature, namely, the method of naming substances without reference to their fundamental properties. For example, the name "oil of vitriol" does not describe sulphuric acid except that it has a deceptive resemblance to an oil and was originally produced from green vitriol. The word "alkaloid" literally signifies a substance resembling an alkali. They do form salt-like compounds with acids, but here the likeness as to specific properties ends.

It is only about one hundred years since the facts as to alkaloids began to accumulate. The first separation of these compounds was made in 1803 by Derosne, but their basic character was not noted until three years afterward by Sertuerner while studying opium. Before this time many plant extracts were known to contain some very active compounds, usually called principles, but their isolation and the determination of their composition and properties date from the first quarter of the nineteenth century.

The first alkaloid that was prepared (and reported) according to the usual method of procedure of the chemists, namely, obtaining the pure compound and then determining its chief properties, was morphine. Although this was done about 1806, it was not until some eleven years afterward that the report attracted the attention of chemists sufficiently to start the investigation of other substances for the presence of similar compounds, with the result that new compounds of this class have been separated and described each year since this date.

The property that especially characterized these compounds was their basicity, i. e., they formed salt-like compounds with acids, although they were but weakly alkaline to the usual indicators of alkalinity.

Composition and Properties of Alkaloids

The alkaloids all contain nitrogen, carbon and hydrogen, and all but two of them contain oxygen. A large proportion of the alkaloids are nonvolatile, solid, crystalline compounds, while a few are volatile liquids but contain no oxygen. They are generally insoluble in water, but are generally soluble in alcohol, and possess varying degrees of solubility in ether, chloroform, amyl alcohol, and carbon disulphide. These latter facts of solubility are often made use of to separate the alkaloids from each other, and from other substances. The salt-like compounds, on the other hand, generally possess a measurable degree of water-solubility, but not in the other solvents mentioned.

Alkaloids differ from the true alkalis, like potassium and sodium hydroxides, in the fact that the molecules of acids and alkaloids unite with each other without forming other products. In this property, they resemble ammonium, HN_3 , when it forms such salts as ammonium chloride, NH_4HCl , or NH_4Cl . However, this property does not characteristically belong to the so-called true alkaloids, since the amines, purin bases, and ptomaines react in a similar manner.

The volatile alkaloids, represented by nicotine and coniine, possess disagreeable odors suggesting in part that of ammonia. The solid alkaloids, represented by strychnine and morphine, are odorless, but have a bitter taste—often very characteristically bitter.

* Reprinted from Pammel's "Manual of Poisonous Plants," published by The Torch Press, Cedar Rapids, Iowa. Price \$1.50.

Physiologically, the alkaloid is quite generally a very active intoxicant, acting directly on the nervous tissues and producing results all the way from the atonic to the strongly tonic effects. The extreme effects are seen in the muscular excitation of strychnine and the depressing action of morphine, or in the heart stimulation of atropine and the depressing effects of cocaine.

Occurrence and Natural Combinations of the Alkaloids

The alkaloids are peculiarly a plant product, and probably may be regarded as a protective agency to preserve a given species of plants. They are deposited in various parts of the plant, but commonly in the seeds. The seeds containing, as they do, the vital parts of annual plants (and also perennials) are protected from destruction by micro-organisms and by animals using them for food by the intoxicating property just referred to. A similar case is that of the glucoside amygdalin as found in the seeds of several of the rosaceae. The enzyme present in the seed, under proper conditions of temperature and moisture, decomposes it into glucose, benzaldehyde, and hydrogen cyanide, or prussic acid, this latter compound acting as the intoxicant.

The alkaloids are not widely distributed in the plant world, although they are found in several orders of families of plants. Three families are especially characterized by the presence of alkaloids, namely, the poppy family, or Papaveraceae, the nightshade family, Solanaceae, and the Rubiaceae.

The basic property of the alkaloids suggests the probability of their occurrence in combination with acidic compounds more or less characteristic of the plants in which they are found. In some cases the so-called alkaloid appears to be similar to the glucosides, i. e., it can be hydrolyzed. For example, cocaine can be hydrolyzed into ecgonine ($C_8H_{15}NO_3$), benzoic acid ($C_6H_5CO_2H$), and methyl-alcohol. Others are real glucosides like digitalin and solanin. It is undoubtedly true that the latter two should not be classed with true alkaloids, but with the glucosides, and are like caffeine and theobromine in this sense, i. e., that they are substances that have been classed with the

alkaloids on superficial grounds, such as bitter taste, but really have no close chemical relation with them. Caffeine and theobromine are now known to belong with the purin compounds. The purin compounds are basic, and hence their classification with the alkaloids.

The acids with which the alkaloids are often united are somewhat common in plants, or, in a few cases, they are characteristically found in combination with the given alkaloid, e. g., meconic acid in combination with morphine in opium, or aconitic acid united with aconitine. Other acids form compounds with the alkaloids in the various plants in which they are found. Among these acids are tannic, citric, malic, and quinic. The combinations are easily broken up by strong bases, like potassium or sodium hydroxide, and in this way they may be separated from the acids.

Since the true (basic) alkaloids are generally insoluble in water, while alkali salts of the acids are soluble, the alkaloids may be separated by treatment with potassium or sodium hydroxide and filtering out the insoluble alkaloid. They are then further purified by the formation of the soluble salt and reprecipitating the alkaloid by an alkali. The basic alkaloid is then dissolved by the appropriate solvent and crystallized.

In this connection, it is interesting to note that an alkaloid rarely exists alone in a given plant but is accompanied by several others. Thus crude aconitine, as extracted from the roots of the aconite plant, *Aconitum napellus*, contains nine alkaloids; in the extract from poppies, called opium, upwards of seventeen alkaloids have been separated and studied; from the so-called cinchona, or Peruvian bark, extracts, some thirty-three distinct alkaloids have been isolated; strychnine is accompanied by brucine in *Strychnos Ignatii*, or Saint Ignatius bean.

Classification and Structure of the Alkaloids

Owing to the basic character of the alkaloids, and the fact that they always contain nitrogen, it was suggested that they were connected with ammonia in some manner, and if so, that they might be readily broken down by distilling them with potassium hydroxide, or caustic potassa. They were

regarded as derived from, or at least connected with, ammonia. Hoffman, who added much to our knowledge of the amin compounds, considered that they were of the ammonia type and were tertiary amins.

In attempting to find some reaction characteristic of the amins, Gerhardt and others heated the alkaloids with caustic potassa, but were unsuccessful in obtaining any results that showed that their basic character was due to this structural cause, although some of them do possess some properties resembling the amins. Others more closely resemble the ammonium compounds. Products obtained by heating some of the alkaloids with potassium hydroxide and distilling the volatile products were found to be the same as were obtained from the destructive distillation of bones.

Later (in 1834) a study of bone-oil by Runge led to the separation of a pure compound which was shown to have the formula C_5H_5N , known as pyridin. This was later shown to be a cyclic (heterocyclic) compound like benzene, one group, " CH ," being substituted by nitrogen, i. e., trivalent nitrogen. A number of alkaloids have been shown to be constructed on this nucleus by substituting various hydrocarbon groups, and are known as the pyridin alkaloids. Among the pyridin alkaloids and derivatives from them are nicotine, coniine, atropine, cocaine.

The study of the alkaloids by noting the action of potassium hydroxide proved to be a fruitful one. In 1842, Gerhardt obtained a compound from the destructive distillation of quinine that was a new substance. This was named quinolin, because of its origin from that alkaloid. It was later shown to be structurally composed of a benzene and a pyridin nucleus joined by two atoms of carbon in common; the further complexity is due to substitution in this nucleus.

Most of the alkaloids are esters and are consequently quite readily separated into the two parts of such compounds, namely, the acid and the basic parts. A study of these constituent parts gives the complete facts as to the structure of the original compound. The esters may be decomposed by acids, alkalis, and water.

The nucleus quinolin has been found in quinine, cinchonine, cinchonidine, strychnine, and brucine, and, hence, these com-

pounds are known as the quinolin alkaloids.

The isoquinolin alkaloids have a nucleus isomeric with the quinolins, or what is known as the quinolin group. Like quinolin, isoquinolin has the empirical formula C_9H_7N . The difference between this base and quinolin, so far as structural constitution is concerned, appears in the position of the atom of nitrogen. Not only is the fundamental nucleus different in these two classes of alkaloids, but groups that enter into these nuclei are different, thus leading to a large number of possible compounds. To this group of alkaloids belong especially the alkaloids of opium, for example, morphine, thebaine, narcotine, narceine, papaverine, and codeine. Here also belong hydrastine, hydrastinine, and berberine.

The Purin Group of Alkaloids

These compounds are not properly included with the alkaloids, but they belong with the purin compounds, or xanthin bases. The nucleus (purin), or the atomic framework, shown by Fischer to characterize the xanthin bases (such as uric acid, the xanthin derivatives, guanine and adenine), is found in caffeine, theobromine, theophylline, compounds that are as yet classed with the alkaloids.

The structural and mutual relationship of these to each other and to the xanthin bases has been determined synthetically and hence their classification is not a doubtful question. The alkaloids are methyl-xanthins. Caffeine is a trimethyl-xanthin, and theobromine and theophylline are dimethyl-xanthins, the latter being an isomere of theobromine. The alkaloid of tea is sometimes called theine, although its identity with the caffeine of coffee has been recognized for a long time.

There are several alkaloids whose structural relations have not been determined. Among these are pilocarpine, colchicine, and physostigmine. For the description of these alkaloids, see statement in this text under their appropriate heads.

Physiologic Action of Alkaloids as Determined by Their Structural Composition

It is within comparatively recent time that pure alkaloids have been prepared, and,

consequently, that their physiologic effects could be determined. Some, like quinine, were prepared in a fairly pure condition during the first half of the last century, but most of them belong to a later period.

Attention has been called to the fact that a single alkaloid is rarely produced by a given plant, and, hence, in the usual extracts from the plant there are several alkaloids exerting varying physiologic effects. These constituents vary in amount according to a variety of conditions under which the plant may produce them. Accordingly, the extracts of such plants will vary in the proportion of the alkaloid present. For example, in cinchona bark the amount of quinine may vary from 2 to 13 percent. The physiologic effect of the various cinchona extracts naturally will be markedly different with such extremes of composition, i. e., with reference to the alkaloid quinine.

In 1860, Crum, Brown, and Frazer called attention to the relation of the structure of organic compounds to their physiologic effects. They were studying the comparative action of strychnine and brucine, and although their knowledge of the structure of these two compounds was not complete, yet they were able to trace a relation in this case. They found that the presence of methyl or ethyl groups strongly affected the active properties of these compounds. For example, brucine is regarded as the dimethoxy derivative of strychnine.

The discovery that most alkaloids are built on one of three nuclei—pyridin, quinolin, and isoquinolin—added new zest to the study of the physiologic effects of certain organic groups when substituted in organic compounds.

Quinolin is a strong antipyretic and antiseptic, but produces other results that are decidedly toxic. By introducing the organic group methoxy, CH_3O , a compound is produced from which several derivatives have been formed which possess antipyretic properties that have led to their use in medicine. These are known as analgen, kairin, kairolin and thallin. Quinine differs from cinchonine in containing the methoxy group in the place of a hydrogen atom. This addition by substitution produces a much stronger antipyretic.

The antipyretic effect of the methoxy group is shown in some of the derivatives of anilin. For example, anilin is a highly poisonous compound, although it has good antipyretic properties. The addition of a similar group to the one in question produces a compound known as acetanilid, or antifebrin. The group added, CH_3CO , is known as acetyl. In introducing the methyl group into acetanilid, its antipyretic properties are somewhat reduced but its antineuralgic properties are increased. The addition of hydrogen to quinolin increases its toxic properties, while the hydroxyl group increases the antifebrile results. The antipyretic properties of antipyrin are probably due to the two methyl groups present in the molecule.

The ethyl group, when added to organic compounds that are poisonous, in many cases at least, decreases their toxic character. The same is true of the acid, or carboxyl, group. When morphine is heated with hydrochloric acid, water is formed (as in hydrolysis) and a new compound known as apomorphine. This treatment has developed two hydroxyl groups. This new compound is an excellent emetic. The introduction of two acetic acid groups changes morphine into a mildly acting sedative known as heroin. Finally, the purin alkaloids owe their properties to the methyl groups introduced into xanthin, that is to say, as distinct from the xanthins.

The accumulation of facts in this direction is increasing rapidly, and some generalization from them will do for medicine what antisepticism and anesthetics have done for surgery, and change it from an empirical to a scientific basis.

The Twelve Groups of Alkaloids

Blyth, in his work on "Poisons: Their Effects and Detection," has classified the alkaloids and other organic poisons into the following groups.

First group: Liquid volatile alkaloids, under which there are grouped the alkaloids of conium, (coniine, conhydrine), tobacco (nicotine), piturine, from *duboisia hopwoodii* (belonging to the same family as tobacco), and sparteine, from the common broom (*spartium scoparium*.)

Second group: The opium group. This contains the alkaloids from the poppy, the more important being morphine, thebaine, codeine, of the morphine group; and papaverine, papaveramine, codamine, laudanine, narcotine, of the papaverine group.

Third group: The strychnine, or tetanus-producing, group of alkaloids. Under this head are included the alkaloids strychnine and brucine, derived from *strychnos nuxvomica*, of the family of Loganiaceæ. The alkaloids are aspidospermine, (obtained from *quebracho*, *aspidosperma quebracho blanco* of the family of Apocynaceæ), and at least four others; the alkaloid from the pereira bark (*geissospermum vellosii*), per-eirine; the alkaloids from gelsemium (*gelsemium sempervirens*, of the family Loganiaceæ), gelsamine and gelseminine; the cocaine alkaloids obtained from *erythroxylon coca*, cocaine, hygrine, etc.; the alkaloids from the roots of the European *corydalis cava*, *corydaline*, *corybulline*, and six others. (*Corydaline*, in large doses, causes epileptiform convulsions.)

Fourth group: The alkaloids aconitine, atisine and japaconitine, of the aconite group, obtained from several species of aconitum, for instance *aconitum napellus*, *aconitum heterophyllum*.

Fifth group: The mydriatic group of alkaloids. The alkaloids of this group are: atropine, obtained from *atropa belladonna* and *datura*; hyoscyamine, obtained from *datura*, *hyoscyamus*, *scopolia carniolica*, and *duboisia* (*hyoscine*, *pseudohyoscyamine* being also obtained from these plants); *scopolamine*, from some of the same plants as the preceding; *solanine*—which is, however, regarded as a nitrogenized glucoside—obtained from various species of *solanum*; *solanidine*, with stronger basic properties than *solanine*, obtained from plants of the same family; *cytisine*, obtained from *laburnum* (*cytissus laburnum* of the family of Leguminosæ) and found also in a considerable number of other plants of the same family.

Sixth group: The *veratrum* alkaloids, among which are *jervine*, *pseudojervine*, *cevaline*, obtained from various species of *veratrum*, as *veratrum album*, *veratrum viride*.

Seventh group: *Physostigmine*, the most important alkaloid of the group derived from the calabar bean (*physostigma venenosum*), and *calabarine*.

Eighth group: This contains *pilocarpine*, obtained from the leaves of *jaborandi* (*pilocarpus pennatifolius*), and three other alkaloids, viz., *jaborine*, *isopilocarpine*, *pilocarpiline*. *Jaborandi* belongs to the family of Rutaceæ.

Ninth group: *Taxine*, obtained from the yew tree (*taxus baccata*).

Tenth group: The curare alkaloids, which are obtained from the curare plants (*strychnos toxifera* and *strychnos castelnaei*, of the family of Loganiaceæ.) The alkaloids are *tubocurarine*, *curine*, and several others. *Protocurine*, obtained from the latter species, is a slightly toxic substance.

Eleventh group: *Colchicine* is the only member, this alkaloid being obtained from the seeds and roots of the common meadow-saffron, or *colchicum* (*colchicum autumnale*).

Twelfth group: *muscarine*, from the *amanita muscaria*, or fly-agaric, is the only representative.

The Glucosides

The glucosides, widely distributed in plants, are compounds of glucose and organic acids, and are certainly of great importance in connection with the poisonous principles found in plants. They have been grouped by Blyth into four groups, namely:

First group: The *digitalis* group, consisting of *digitalin*, *digitonin*, and *digitogenin*, all found in the common foxglove, *digitalis purpurea*.

Second group: These glucosides act on the heart. They are: *antiarin*, obtained from *antiaris toxicaria*, the upas tree; *helleborin* and *helleboretin*, found in *helleborus niger*, *helleborus viridis*, *helleborus foetidus*; *euonymin*, a resinous substance found in wahoo (*euonymus atropurpureus*), which is a powerful heart poison.

Third group: This contains: *thevetin*, obtained from *thevetia nerifolia*; *strophanthin*, from *strophanthus hispidus* of the Dogbane family, belongs to this group of heart poisons, but it is not a glucoside and only partly crystallizable; *scillain*, from *scilla*; *adonidin*, from the root of *adonis*

vernalis of the Crowfoot family; oleandrin, from the oleander; nerlin, also from oleander, sometimes called the oleander digitalin; the poisons of the Madagascar ordeal plant (*tanghinia venenifera*).

Fourth group: This contains the digitalin-like apocynin, from the common dogbane and other apocynums; erythrophlein; convallamarin, a glucoside from the lily-of-the-valley; coronillin, from coronilla; cheiranthin, from cheiranthus. These behave like the digitalins.

The Gluco-Alkaloids

The gluco-alkaloids represent a class of compounds intermediate in connection between the alkaloids and glucosides. The achilleine, found in yarrow (*achillea millefolium*), and solanine present in various species of solanum, should be mentioned. The latter substance has, however, been referred to in connection with the alkaloids.

The Saponins

The saponins are poisonous. When dissolved in water they form solutions which froth. Among these, mention may be made of saponin and senegin.

Other Vegetable Poisons

A third division of poisonous substances includes those which cannot be readily classified, and under this head we have santonin, a lactone, found in the heads of artemisia sp. A second division of this group is represented by mezecone, obtained from daphne mezereum. A third group is ergot of rye, containing ebolin, secalin-toxin, and other substances.

Picrotoxin, Cicutoxin, and Toxins

Picrotoxin is the active principle of the Indian-berry (*cocculus indicus*, or *menispermum cocculus*), which contains the active principles picrotoxinin, picrotin, and menispermicin.

Tutin, a nonnitrogenous glucoside, is obtained from *coriaria sermentosa* and other species.

Another poison belonging to the picrotoxin class has been isolated from the Japanese *illicium anisatum*, a member of the *Magnolia* family. This plant is sometimes

called the Japanese star anise. To this group may also be added cicutoxin, obtained from the cowbane; the oil of savin, obtained from the common savin (*juniperus sabina*); croton oil, expressed from the seed of croton tiglium; the toxalbumins of the castor-bean, and of abrus; ietrogen, from various species of lupines (*lupinus luteus*, *lupinus hirsutus*, etc.); the toxic substances in the cotton-plant seeds; toxic substances in various species of lathyrus; the toxic substances in arum; those in the black bryony (*tamus communis*); the toxalbumin of the black locust; and the poisonous substances of the male shield-fern.

The Animal and Plant Toxins

Another group of poisonous substances is included under the head of ptomaines and animal toxins. The word ptomaine is used in a rather indefinite way, and is open to objection, but the classification, by Blyth, as an animal toxin is also objectionable. Many of these toxins are the products of bacteria. Some of these poisons, however, are the products of higher plants (as toxins of the black locust, of abrus, etc.). The groups given by Blyth are the amins, under which head we have methylamin, found in the cultures of the comma bacillus, and the trimethylamin, nontoxic, found in a variety of putrefying substance.

The Amins

The amins are basic and originate from ammonia; they include the diamins, belonging to the amin series, which are formed in putrefactive substances. Of these, we have neuridin, generated in putrefying substances; cadaverin, found in cultures of spirillum and putrid animal matter; mydalcin; guanidin.

The cholin group includes neuridin, betain, and muscarin. Muscarin has been referred to elsewhere. Neurin is intensely poisonous. (Atropine is an antidote to neurin.) Tetanin produces tetanus. Tetanotoxin, from tetanus victims, produces tremor-paralysis and violent convulsions. Mydotoxin, contained in putrid horse flesh, is poisonous in large doses, causing lacrimation, diarrhea, and convulsions. Tyrotoxin, isolated by Vaughan from milk, is toxic. The susotoxin, isolated from hog cholera, is said to be quite toxic.

The last group of poisonous substances includes the organic acids, the most important of which is oxalic acid. This substance is widely distributed in the vegetable kingdom, both in the free state and in combination with lime, soda, and potassa. It occurs in some species of the geranium, spinach, *phytolacca decandra*, pie-plant, *rumex acetosa*, and in *atropa belladonna*, in connection with potassa. In the Russian thistle and in *salicornia*, it occurs in combination with sodium. In clover, apple twigs, begonia, and many other plants, it occurs in the form of so-called compound aggregate crystals, or rosettes, of calcium oxalate, but in the onion and some other plants as simple crystals. In aroids and Virginia creeper it appears in the form of needle-shaped crystals, known as raphides. These are formed during the metabolism of the plant, the oxalic acid being set free and,

uniting with the lime in the plant, it forms calcium oxalate.

Oxalic acid is commonly used by dyers and calico-printers, and also by curriers and harness makers for cleaning leather, to remove iron stains, to bleach straw, and for many other purposes.

Several cases of poisoning have been attributed to the use of plants (like the sheep-sorrel, *oxalis*, etc.) that contain large amounts of oxalates. Quite a number of cases of poisoning from this acid are reported, especially in Europe.

The smallest dose of oxalic acid known to have destroyed life, according to Dr. Taylor, is 60 grains. Oxalic acid acts upon the central nervous system. There is temporary loss of voice, burning in the throat, burning in the stomach, vomiting, especially bloody matter, weak pulse. Locally it acts on the mucous tissues.

Sexual Impotence Resulting From Typhoid Fever

By WILLIAM J. ROBINSON, M. D., New York City

Editor of The American Journal of Urology, The Critic and Guide, and The Medical Review of Reviews

WITHIN the past fifteen months the writer has had under treatment four cases of sexual disorder, the history of which seems to point conclusively to typhoid fever as the sole etiologic factor, and for this reason, as well as on account of several other points connected with them, they are, in his opinion, worth recording:

Azoospermia Following Typhoid Fever

Case 1. P. N., merchant, 35 years old, married nine years. Three years after marriage the wife had a miscarriage. At the age of 30 he had a severe attack of typhoid fever, with very high temperature and delirium, and a tedious convalescence. He went without intercourse, both on account of general weakness and lack of desire, for five months. On attempting intercourse then, he found ejaculation *præcox* and total

lack of any pleasurable sensation. Inquiry elicits the fact that he masturbated excessively from 14 to 17, but then gave up the habit entirely and indulged in moderate intercourse. When married, his sexual powers were normal, and for the first year he indulged excessively; is sure that he noticed no diminution of sexual desire or power until his attack of typhoid. Has never had venereal disease.

His urine is clear; no shreds; slight excess of phosphates; no albumen; no sugar. There is no stricture, but excessive tenderness of the posterior urethra. Prostate is normal; expressed prostatic secretion is normal. Microscopic examination of liquid from the seminal vesicles *fails to reveal a single spermatozoon*. Examination repeated a week later yields the same results. Nine examinations were made altogether—in six the semen was expressed from the seminal

vesicles, and in three the fresh semen was obtained in a more natural manner in a condom. Every examination showed a total absence of spermatozoa.

The patient is absolutely sure of the connection of his typhoid fever with his sexual weakness, and in spite of the fact that we must guard against the only too common *post hoc propter hoc* mistake, it would be pushing skepticism too far to doubt, not only the chronologic, but the causative relationship of the two diseases in this case.

As to the complete azoospermia, we are also forced to assume (in view of the fact that the patient's wife *was* pregnant once), that that was also caused by the typhoid fever. But, of course, no scientific proof can be offered on this point. For it is, after all, not so utterly impossible to believe that the wife might have been pregnant from another man. Personally, I am rather inclined to believe that this was the case, and that the patient's azoospermia antedated his typhoid fever. The fact that during four years of marital life—from the marriage to his attack of typhoid—in spite of the fact that they were both desirous of having a child, the wife was pregnant but once, as well as certain indications that the miscarriage was probably not a spontaneous one, rather speak in favor of the correctness of this belief.

The result of six months' treatment was a complete restoration of the sexual function, both so far as erectile power, time of ejaculation and libido sexualis are concerned, but the azoospermia remains as absolute as before.

Nocturnal Emissions After Typhoid Attack

Case 2. Drug-clerk, 24 years old. Unmarried. Complains of frequent night emissions without any erections and without any lascivious dreams. Has no sexual desire whatever, and no erections. History: Masturbated moderately until about 18; indulged in intercourse moderately after that, and felt perfectly normal up to one year ago. Had then an attack of typhoid fever during the course of which *he thinks* he had a slight urethral discharge. He was sick in bed for about six weeks. When he got well he began to notice the night emissions, which

he ascribed to the fact that he refrained from intercourse for over three months. When he attempted intercourse, he found it impossible to effect entrance, as there was no trace of an erection. Since then he did not repeat the attempt. In the meantime the pollutions kept on increasing in frequency. He denies ever having had gonorrhea, and the findings corroborate his statement.

The urine is clear, no shreds; prostate normal in size, but rather tender; prostatic secretion normal. Semen contains abundant spermatozoa, normal in shape and size, but with an apparently diminished motility. Testicles rather shrunken, sensitive to the touch. Penis shrunken; no strictures; posterior urethra exquisitely sensitive.

In this case also there is no valid reason to doubt the direct causative relationship between the patient's attack of typhoid and his subsequent sexual disability.

Impotence in a Physician

Case 3. N. T., physician, 40 years old. Had gonorrhea at the age of 20, a second attack three years later (whether a fresh infection or an exacerbation of the old, imperfectly cured gonorrhea he is uncertain) and a third attack at the age of 28. Married at 33. Has two children, perfectly healthy. At the age of 38 he had an attack of typhoid fever—not particularly severe. Convalescence was uneventful, but when attempting intercourse later, he found himself entirely impotent. Libido sexualis was not in the least diminished, on the contrary, it was increased.

Dr. T. has no hesitancy in asserting that in his opinion the impotence is unquestionably the result of the typhoid fever. It might be objected that in this case the impotence may have been caused by the old gonorrhea—the chronic posterior urethritis, which was in a dormant quiescent condition, was stirred into activity by the febrile process. But whether the impotence was due to the typhoid fever directly, or only indirectly, by the latter intensifying an old dormant inflammatory process, is of little importance from a practical point of view. The fact remains and must be borne in mind that sexual impotence may be one of the sequelæ of typhoid fever.

Case 4. This was a case of female impotence. While the term sexual impotence is employed in connection with the male sex only, there is no valid reason why we should not apply it to women also. It is true that the woman's role in the sex act is different from that of the male, but outside of one feature—that of erection—a woman may be as truly impotent as a man. The indifference and even aversion to intercourse, the completion of the orgasm in the fraction of a minute, the extreme lassitude and exhaustion, the feeling of loathing and even physical nausea following the act constitute a symptom-complex to which the term sexual impotence may be applied with full justice, for in practice they render the woman almost as useless for the purposes of sexual gratification as an impotent man is.

Frigidity Due to Typhoid Fever

Mrs. N., 36 years of age, mother of four children, was perfectly normal sexually; during the last four or five years her libido sexualis became considerably accentuated, according to her husband's statement. In the fall of 1909 she passed through a severe attack of typhoid fever. She was seven weeks in bed and it was five weeks more before her health was fully reestablished. She, however, recovered completely so far as her general health was concerned. She even weighs more than she did before her illness. The only physical sign the typhoid left her is a tenderness in the right ovarian region.

But sexually she has undergone a complete metamorphosis. She has a positive dislike for the sexual act, and when indulging in it to satisfy the sexual demands of her husband, the orgasm supervenes "instantly," and leaves her in a state of complete exhaustion. She dreads to think

of it. In short, we had to deal with a typical case of sexual impotence in a woman. She asserted that she never felt that way, not once even, before her typhoid, and inquiry elicited the information that during her illness she had frequent lascivious dreams and very frequent orgasms; she had some of them also during convalescence, but they became gradually less, until they left her altogether. And while she feels well otherwise, sexually she is completely crippled.

General tonic, electric, and hydrotherapeutic treatment produced some improvement in her condition, but the improvement was slow, in fact so slow that I am not sure that it cannot be ascribed to the suggestion element in the treatment instead of to the treatment itself.

During the past year I made it a special point to interrogate carefully every impotent patient as to any typhoid history in the past. And while the histories, where such were present, were not definite enough to establish a positive causal relationship, the *impression* gained was to the effect that such a relationship existed. In some cases a mild degree of impotence existed before the typhoid and became aggravated or complete after the disease, in other cases the impotence came on six months, a year or more after an apparently complete recovery. In short, in many cases the histories are not positive enough to avoid the pitfall of mistaking a sequence for a consequence.

In view of the great prevalence of typhoid fever and the tremendous social importance of sexual impotence, I would suggest that physicians investigate the question of the causal relationship of these two diseases and report their findings to me personally or through the medical press. It is a subject well worthy of further investigation.



The Nez Percés Indians

By CHARLES STUART MOODY, M. D., Sandpoint, Idaho

EDITORIAL NOTE.—This is the sixth installment in Dr. Moody's serial about the Nez Percés Indians. It grows in interest. While it is not strictly "medical," it is filled with matter of intense interest to physicians as well as to physicians' wives. The series will be continued for several months. You will want to read every number.

VI

Captives

BEFORE returning to the Nez Percés that were left behind when the Wallowa branch went on the warpath, I must relate what became of the followers of Chief Joseph after their capture on the Bear Paw; and in the telling, you will read the greatest wrong ever perpetrated upon a conquered people.

It will be recalled that General Miles promised Joseph that, if he would surrender and prevent further bloodshed, he and his people would be returned to their homes. This was when the chief first came into camp and discussed the subject of surrender, and before General Howard had arrived. The latter arrived the following day and was present at the surrender.

Solemn Promise is Basely Broken

General Howard was stinging under the defeat he had suffered at the hands of the Indians and was childishly bitter toward them, and no sooner did he have the Indians in his power, than he sat about devising means for further punishing them. He thought it would be a grave mistake to return them to their reservation and so expressed himself to the War Department. His opinions were listened to, and the captives were taken to Tongue River, thence to Bismark, where they were kept during the winter in crowded, illy-ventilated huts, with but little fuel, and insufficient food. The next spring these deluded people were removed to Fort Leavenworth, where they were herded like cattle close to the Missouri River.

The sufferings of the poor creatures that dreadful summer can never be told. Exposed to the stifling heat, without adequate shelter, poorly clothed, without proper food, compelled to drink the stagnant water of the

river, they died like flies. To a people reared in the mountains of the West, where the air is cool, the water pure, the experience was something indescribable. From Leavenworth they were next moved to Baxter Springs where they were set down destitute and without medicines or care. Seventy of them gave up the struggle, turned their faces toward the West and died.

It must have been that the government feared all the Indians would die, for they were again transported, this time to the Osage Reservation in the Indian Territory. Here they were given a strip of land and virtually told to look after their own support, even though it was late in the fall when they arrived. How many of them actually starved to death that winter will never be known—the deaths appear on the records under less ugly titles.

The President Finally Intervenes

After a time Joseph was permitted to go to Washington, where he laid his cause before the President. The President was struck with the sincerity and candor of the chief. He took the matter under advisement, and it was finally decided to allow the Nez Percés to return farther west where climatic conditions were more nearly the same as they had been accustomed to. They were given a home on the Colville Reservation, in Washington, and there Joseph and the miserable remnant of his people lived until the old chief died, and where a few surviving representatives of his people still reside.

The foregoing is but a brief synopsis of what took place after the surrender. I wish that I might have space to tell you all that happened. I wish that I might be possessed of eloquence of language powerful enough to cause the miserable story to burn into

your soul until the memory of it would remain with you for life.

The treatment of the conquered Nez Percés by our government was barbarous—no other term expresses it. The punishment meted out to the people, whose sole crime was that they fought for their homes, was more savage than any punishment these untutored children of nature ever devised. It would have been far more merciful had the soldiers drawn the captives up in line and executed them. How a nation, headed by men calling themselves Christians, could be guilty of such atrocities surpasses human understanding. How a man could apologize for such actions, as has been done, is beyond belief.

Social and Home Life of the Nez Percés

In considering the social and home life of the Nez Percés, it will be understood that I am speaking of them before they adopted any of the social customs of their white neighbors. The investigators at the present time will find among them a curious blending of the social traits of the savage with those of the Anglo-Saxon, a commixture that is perfectly characterless. In the old days, before the white man made his influence felt, the Indian practised a set of social rules that were doubtless the outgrowth of their environment and were peculiarly adapted to their sphere of existence.

Before entering upon the discussion of the characteristics of the Nez Percé in his home relation and his relation to his fellow tribesmen, it will be necessary to correct an erroneous impression that prevails among persons unacquainted with Indians and their mental make-up.

It is the popular belief that the Indian is a morose, sullen, taciturn and unsociable being. This idea probably gained prominence by the laughable attempts of the verdant "tenderfoot" at conversing with the Indian, than whom no prouder being treads the earth. The Indian resented any attempt at familiarity just exactly as you or I would resent it coming from an entire stranger. Let me illustrate my meaning by recounting a conversation I overheard one day.

A gentleman bearing all the marks of education and refinement was touring the

country west of the Rocky Mountains and visited our Reservation. He walked up one day to an Indian friend of mine—a graduate of Carlisle, by the way—who was standing on the stoop in front of my office. The young Indian was garbed in his native dress and had allowed his hair to grow long, as many of them do after returning from college. The tourist walked up to him, reached out his hand and said:

"How big chief? How's your squaw?"

My Indian friend drew his blanket about him, disdained the proffered hand, and replied with the utmost scorn;

"I beg to inform you that I am not a chief, either big or little, and as for my wife, she is enjoying the best of health."

With that he turned on his heel and walked away.

This incident should have taught the eastern man not to attempt to patronize an Indian, but I am sorry to say that it did not.

The Indian is Not Taciturn as Depicted

The taciturnity and moroseness of the Indian has always been due to his misunderstanding of the motives of the white man, or rather, it has always been due to his too acute perception of the motives. The white man has always approached the Indian in a spirit of curiosity, never sympathetically.

How would you feel if, say, an educated Chinaman should come into your dwelling, fumble over your household goods, peer at you curiously while you were at table, ask impertinent questions about your family, insist upon taking photographic snapshots of your children, or do any one of the hundred and odd things I have seen people do with the Indians? You would doubtless exercise your Anglo-Saxon prerogative and kick that celestial's backbone up through his scalp so far that he could dispense with his queue. The Indian does not resent your impertinence in the same manner, but he takes refuge behind an impenetrable reserve.

Indians are not devoid of humor, rather the contrary; they are as appreciative of a joke as any race on earth. An Indian encampment at eventide is a scene of great hilarity, peal after peal of laughter awakes the echoes of the giant hills, and every face wears a smile of contentment. I crave

permission to relate a single incident that will serve to illustrate the Nez Percé's conception of a joke.

The spring that we came among the Indians the salmon "run" in the river was unusually large. The Indians spent weeks in catching and drying the great fish. I was but a novice and appealed to an Indian friend to teach me the art. We were out in the middle of the swift current of the Koos-koos-kia, my Indian friend manning the dug-out canoe, myself holding the baited line. I felt a mighty tug at the hook down in the dark water, and gave it a prodigious pull. It did not yield, and I certainly thought I had snagged a monster. In fact, I said as much to my companion. The latter swung the canoe broadside to the stream and called words of encouragement to me as I fought my big fish. My efforts to land my captive attracted the attention of all the Indians near. They ceased their occupations and watched the battle.

After something like ten minutes I began to have a faint suspicion that I was fast to something less animate than a salmon. When, at last, I looked appealingly at my boatman, he could restrain his glee no longer but broke into a great roar of laughter which was echoed by all the watchers on shore. Then he informed me that my hook was fast beneath a rock in the stream and the action of the current made it appear as though I had a fish on. If I were to return there today, some of those old Indians would most assuredly recall that big salmon, with a pleasant grin.

The Social Organization of the Indian

Let us now get back to the life of the Indians. The family, as with all primitive peoples, was the basis of social organization. The family did not always consist of those bound together by ties of consanguinity, but in many instances allied tribes or settlements came together and were united into a common family presided over by a senate of elders—old men who had grown wise with years. Younger men famed for deeds of prowess or acts of public benefit often were admitted to this senate also. This legislative body met whenever occasion required, generally on the green in front of

the camp, beneath the shade of a tree, and discussed the matter or matters that had brought them together.

Each tribe or family promulgated rules for its own guidance without consulting the head council, which I shall consider under another head.

It was necessary that the matter at issue be concurred in by all the members of the council—if there was one dissenting voice it did not become the law. Often weeks were spent in bringing a refractory councilor to a proper understanding of his duty. As a general thing, however, matters were settled very quickly, and when the crier announced in front of each lodge the decision, no Indian thought of questioning it. Implicit obedience prevailed, handed down from a time when their safety depended upon their all moving in unison.

The Indian Woman and the Marriage Relation

The relation of the Indian husband to his wife has been the subject of a great deal of comment, and the Indian woman has been the recipient of tons of misplaced sympathy. Long-haired men and short-haired women who pose as social reformers have shuddered with righteous indignation at what they were pleased to term the "slavery" of the Indian woman.

We, in our "superior" civilization, have placed our women upon a pedestal and worship them; the Indian looks upon the gentler sex as copartners in the battle for existence and as such entitled to bear her share of the burdens. In this he is not far behind certain European peoples who harness their women in the yoke with the oxen and cause them to draw the plow. Nor is he behind the employers of labor in our metropolitan centers, who wring the lives from women and girls in miserable "sweat-shops," for the sake of a few paltry dollars.

All this misplaced sympathy comes about through an inability on the part of the so-called reformers to grasp the very potent and self-evident fact that no people can be civilized by act of Congress, so to speak. Civilization is an evolution, and evolution is remarkably slow. You may educate and Christianize the Indian, you may surround

him with all the examples of civilization, and there still lurks in him the savage instinct. He cannot throw aside the traditions and teachings of ages in a change of the seasons.

You may see an Indian woman bearing a heavy burden while her lord stalks along at her side, or rather in front, burden-free. If you are a student of Indians, your indignation will not rise at the sight, for you will see in it merely a survival of the primitive instinct. In the past the menial duties were assigned to the woman. Hers the task to dress the meat her lord had slain, fetch the wood for the cooking fire, dress the skins that were made into garments or for tentage, in short, perform all the services appertaining to the camp life. When moving time came, it was her duty to strike the tepee, pack the duffle and arrange the camp in its new site. To our educated eyes, these things were all servile and beneath the dignity of women. To the eyes of the Indian, they were her just and equitable apportionment of the tasks of their nomadic life.

While the Indian woman was doing all the menial tasks above mentioned, was the Indian man idle? Far from it. His the task of securing the game, and any man who did not procure provisions for his family was soon socially ostracized. With proverbial Indian charity, the other men in the tribe did not see the women and children suffer from lack of food, but the shiftless husband was given nothing. In addition to procuring food, the husband must hold himself in readiness at all times to repel attacks from enemies, his war pony must ever be in readiness, his bow and arrows always in trim.

With these facts in mind, it will readily be understood that when the government took over the protectorate of the Indian, supplied him with provisions for the asking, the occupation of the Indian husband was gone, while that of the Indian wife remained. It was impossible for the savage mind to grasp the sudden change, and consequently the Indian husband went on in the same old rut; and the Indian wife did the same.

Let eastern philanthropists give the Indian man credit for the fact that he was willing and ready at all times to lay down his life in defence of his family, and cease bewailing

the fact that the Indian woman was a slave—a condition that was vouchsafed her by primitive conditions.

Nuptial Customs

Indian marriage customs furnish an interesting chapter in Indian social life. A volume might be written on this topic without exhausting the subject. Only such salient points will be touched upon as will serve to present a picture of Indian life.

The Indian girl of marriageable age, that is, about sixteen, was looked upon by her father as so much negotiable asset, to be converted into increment when the proper buyer appeared. The girl herself was not consulted with regard to her personal choice, and love affairs were unknown. That statement, though, is subject to some modification.

If an Indian girl took a liking to a certain eligible young man, like her civilized sister, she had means of making that fact known. If a certain young man should arise some morning and find a toothsome venison pastry reposing in mute appeal before his tepee, he were a dullard indeed, did he not guess from whence the offering came and translate it into a wish to supply similar morsels for his palate through life. Generally he "tumbled," to use a westernism, and immediately made such advances to the young lady's father as would lead to negotiations toward marriage.

These negotiations usually consisted in the proffer of so many ponies in exchange for the young lady's hand, though other articles of value, such as canoes, buffalo robes, dogs, fishing tackle, fire-arms, etc., were often considered. It is curious to note in this connection that whatever the medium of exchange, the value was based upon the pony.

The father of several eligible daughters considered himself a savage Croesus, and, indeed, he occupied such a position in the tribe, for when his brood was disposed of, he generally found himself in possession of practically all the wealth of the younger portion of the tribe.

The Potlatch

There was practically no marriage ceremony, although the father of the bride usually gave a "potlatch" to celebrate the

nuptials. This "potlatch" deserves especial notice, as it occurs in various phases of Indian life. If a man's son kills an enemy in battle, or in times of peace if he slays a bear, if any good luck befall a man, if anything out of the ordinary happens, he gives a "potlatch" to which all the tribe is invited. A "potlatch" is a feast in which eating, singing, dancing, story telling, gambling are indulged in for days at a time or until all the food obtainable is exhausted. So when a father had disposed of a daughter to advantage, he generally called in all his tribesmen and dined them.

After the "potlatch", the young people betook themselves to the residence of the groom's parents and went to housekeeping in a tepee prepared for them. From that time the bride was reckoned with the groom's tribe. Her dowry consisted only of the things she herself had accumulated, such as bedding, robes, tepees, cooking utensils, and her personal herd of ponies. Sometimes this last consisted of only one or two, her riding pony and her pack-animal.

Plural Wives

Polygamy was permitted, but it was by no means common. Only elderly men, possessed of a competence, were prone to take more than one wife. It must be understood that a man was expected to provide comfortably for his women folk, and if he possessed a plethora of them, he could not do this, hence he was perforce obliged to content himself with only one. It may be added that where there were several wives in the family, they resided together harmoniously; there was no dissension or strife for precedence. Each had her allotted task and performed it uncomplainingly.

Divorce

Divorce was common, and without the intervention of any court. If a man became tired of his wife, he put her away without consulting the advice or opinion of any person, nor did he have to assign any reason for his action. He was, however, in duty bound to provide for her until she found another husband, which, I will add, she did quite promptly. It is rather interesting to note that divorce always came from

the side of the husband, never the reverse. There were times when a woman, dissatisfied with her lot, decamped with another man, but for the woman deliberately to divorce her husband was unknown.

Elopement was a crime and the punishment fell most heavily upon the woman. In many instances she was executed, though there might be mitigating circumstances, as for instance, failure to provide, that would modify the sentence materially. The Lothario, if caught, was generally rendered incapable of procreation, if poor; if wealthy, he could buy his freedom.

There were a few rare instances of where a man sold his wife. If she very much admired another man and he was willing to pay the price, the exchange was made and all parties to the transaction were happy—the seller in possession of a new herd of ponies, the buyer in possession of the woman of his choice, the woman herself in possession of a new man. What could be more equitable?

The Treatment of Children

When quite a small boy, I read with a great deal of horror a book which told of how the Indian parents mistreated their children. I suppose I grew up with a fixed idea of the inhumanity of Indian parents. I had dreams of how they bound them to trees and hurled hatchets at them to make them brave; thrust their feet into burning coals to teach them fortitude; cast them into roaring torrents to teach them how to swim; and divers and sundry kindred indignities.

If you, my dear readers, are possessed of similar notions, the facts unadorned will doubtless afford you a great deal of pleasure. There is no more kind and indulgent parent than the Indian parent. There is no more obedient and tractable child than the Indian child. I am not now talking from cursory investigation, but from over twenty years' experience among them. In all those years I never saw an Indian father correct his child either by word or blow, nor did I ever see an Indian child that merited correction. Obedience, with them, is a cardinal principle. Their very life demands it. Not only does the Indian father not correct his children, but in all things he makes a com-

panion of them, a lesson that civilized parents would do well to heed. If he goes hunting, his sons go also; if he fishes on the river, his sons fish with him. If he rides forth after stock, his sons keep him company. Where you see one, there you see the other.

It is true that their mode of life demands that the child be taught to ride almost from the cradle. I have seen youngsters of less than three years strapped to some gentle old pony, jogging along the road, oftentimes asleep. It is true that the children are inured to hardships—their mode of life demands that they should be. As the father treats his sons, so does the mother treat her daughters. They are inducted into the

mysteries of camp life at a surprisingly early age. Girls of a very tender age may be seen pounding camas, dressing skins, jerking venison, performing the various duties of their outdoor existence.

In the children themselves, reverence for elders and superiors is a cardinal principle. Every old man is either "father" or "uncle," and their universal request is, "Teach me." They recognize that in age there is wisdom of their manner of life, and from age they must learn. Many times I have seen groups of children seated about the knees of some sage of ancient mien listening intently to the sagas of the Indian people as they fell from his lips.

Treatment of Injuries of the Pleura*

Surgical and Traumatic

By J. S. DEAN, M. D., Wheatland, Iowa

IN considering the treatment of cases classed under this heading, we have some conditions to meet not associated with wounds and abscesses in other parts of the body. All surgical wounds of the pleura are made for the purpose of draining effusions or of removal of adhesions or foreign bodies, pathological or otherwise.

In this paper we have included in the title traumatic injuries, because all traumatic injuries cause conditions parallel to those produced by surgical procedure, except that a large percentage of cases requiring surgical interference with the continuity of the pleura are septic in character, while cases of accidental trauma often leave the pleura free from infection or only fill the pleural space with an aseptic effusion of blood or simply produce a noninfected pneumothorax.

If these noninfected collections are present, then the treatment is as short and terse as the expression, "Leave it alone." If the accumulation from traumatic injury gives evidence of infection, viz., rise of temperature, sweats, and hectic, or if the opening into the pleural space is so large as to admit

a continuous flow of air which will pretty surely lead to infection, then the case should be dealt with in the same manner as wounds produced surgically.

In considering the treatment of open wounds of the pleura from the present-day standpoint of asepsis and antisepsis, we have some conditions to meet that are not associated with the treatment of open wounds in other regions. In treating open wounds and accumulations of morbid material in other parts of the body than the pleural space, we have only to consider dependent drainage, antisepsis or asepsis and careful sterile dressing to prevent infection by entrance of air.

In pleural injuries, however, we have to consider: (1) Collapse of the lung as soon as free opening is made into the pleural space. (2) Constant entrance of air during inspiration, with its almost constant result of keeping up infection or of introducing mixed infection when the contents of the pleural space were sterile at the time of operation. (3) The return of pus or other detritus to the pleural space after its exit, by the suction through the wound on inspiration. (4) Expansion of the collapsed lung completely,

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without which the desired result cannot be obtained, be the pleural space aseptic or septic.

Essentials of Treatment of Open Wounds

Going back again to the essentials of treatment of open wounds, namely, (1) dependent drainage, (2) asepsis, (3) measures of whatever character to cause the cavity or opening to close from the bottom outward, (4) preventing the entrance of air that may be infected, and then applying them to wounds of the pleura, we conclude:

1. That dependent drainage can be obtained in pleural effusions and pleural injuries as elsewhere. (2) The production of asepsis or antisepsis in pleural conditions cannot be obtained unless some device can be used to prevent entrance of air into the pleural space during respiration. (3) The closing of the cavity cannot be attained unless the lung can be expanded, and if adhesions are to be avoided, this must be caused with maximum speed and without mechanical or other interference with the lung.

The prevention of entrance of air, reinfection by sucking of discharge back into the pleural space, expansion of the collapsed lung, and a dressing that will remain in place under normal and abnormal chest movement and especially during the effort of coughing, have taxed the skill of surgeons since the first operation for the removal of pleural effusions was performed; and I think all thoughtful physicians and surgeons will acknowledge that the reason for failure to close pleural abscess cavities and the large number of permanent fistulas reported is the difficulty in attaining the conditions enumerated.

Consequently, the conclusion must be that, in order to treat wounds of the pleura consequent to pathological conditions within the pleural space with the same accuracy as we treat wounds in other regions, we must in addition to conditions met with in other localities meet the following requirements:

1. Cause rapid expansion of the lung for two reasons. (a) to prevent adhesions between lung and parietal pleura, and (b) to close the abscess cavity. (2) To prevent entrance of air into the pleura on inspiration

and also to provide perfect drainage on expiration—for this fact is patent, that under no condition, natural or physiological, can we obtain drainage except on expiration. (3) If we can prevent entrance of air on inspiration, we also prevent reentrance of expelled discharge within the pleural space. (4) After two years of study and experiment, we are prepared to discuss, later in this paper, the influence of adhesions in preventing closure.

Anatomical and Physiological Points

To discuss properly the points above enumerated, we find it necessary to go back and discuss some points in the physiology of respiration and of the anatomy of the lung. Dr. Robert Fingerstadt says:

"The lungs are enclosed in air-tight cavities; between them and the thoracic wall or the organs contained in the thorax there is no air. Since the lungs are hollow sacs with elastic and easily distensible walls, it is obvious that they must dilate every time the thorax is expanded and must become smaller every time it is contracted. Since, further, the lungs are in open communication with the external air by the respiratory passages, it follows that in the former event air must be sucked into the lungs and in the latter it must be driven out."

The word "sucked," which he uses, I must confess, is an unfortunate expression, as this is only true on forced inspiration. In normal respiration the air simply flows in as water runs down hill, and it is only under forced inspiration or when breathing at high altitudes which really causes forced inspiration that air is actually sucked into the lung, that is, enters with more force and rapidity than would occur in the movement of air currents seeking equal atmospheric pressure.

Dr. Fingerstadt continues:

"Following this, it has been proven by various experiments that intrathoracic pressure, that is, between lung and chest-wall and within the pleural space, is negative for normal expiratory position, 5 to 6 mm. Hg; for ordinary inspiration, in the neighborhood of 8 to 9 mm. Hg; and for deepest inspiration, 30 mm. Hg." Do not mistake. This means relative negative mercurial pressure,

not atmospheric pressure, as the pleural space is void of air.

From these experiments some have advanced the idea that negative pressure is necessary to cause expansion of collapsed lung. Perhaps this is theoretically true, but every surgeon knows that practically it is not true. Heavy dressings, the use of the constricted tube, and the Wolff's bottle method, have caused expansion in thousands of acutely collapsed lungs. Although these methods are slow, and oftentimes because of their slow action permit adhesions that delay or prevent closure of the infected space, nevertheless, these inadequate methods have accomplished the result frequently enough to prove positively that all that is necessary to cause expansion of collapsed lung is to cause a modified or relative negative air pressure, as compared with intra-lung pressure, that is, by way of bronchi and *ar-vesicles*. The rate of expansion will depend upon the depth of inspiration and the perfection of the device used to close the pleural opening during inspiration.

Methods of Expanding Collapsed Lung

Many devices have been used to cause expansion of a collapsed lung, among which may be mentioned sealing of the wound, as advanced by Dr. Howard, U. S. A., 1864, during the War of the Rebellion. It failed, of course, because drainage was not provided. Heavy dressings were followed by moderate success. Blowing through a constricted tube and the Wolff's bottle method were followed by better results. But none of these devices met the need for short drainage tube and of preventing the reintroduction of the escaped discharge into the pleural space.

Later came the rubber dam around the drainage tube and putting the distal end of the tube under water. Attaching a Pulitzer air-bag to the end of the tube and permitting drainage into the bag or tube under suction has also been used.

Dr. Bryant's method was the use of a specially constructed syringe so arranged, with a two-way cut-off, that accumulated discharge can be disposed of without admitting air to the pleural space. This device necessitates strapping close to the

wound. A great objection, in many cases, is the irritability of the skin; the rubbering dam has the same objection; and all the suction devices have the objection of requiring constant watching and the impossibility of maintaining in position without using a drainage tube projecting into the pleural space. Finally, they are not automatic, and any device to be just right must work with the same automatic regularity as inspiration to accomplish the two necessities, perfect drainage during expiration and expansive influence during inspiration; and, further, not only to prevent entrance of air, but prevent return of expelled discharge.

Still other devices for aspiration, of various patterns, have been devised upon the following general plan by Langier, Dieulafoy, Potain, Laurens, Walker, and Kenton and Pool.

The use of a tube, the stem of the tube entering the pleural space, one arm being attached by rubber tubing to the water supply and another tube attached to the second arm of the tube and leading to a receiving receptacle, the effect of running water from the tap through the tube inducing a negative pressure and at the same time aiding drainage. This device does not permit the patient to be ambulatory in any degree, and keeps a negative pressure within the pleural space constantly both during inspiration and expiration.

The palpable clumsiness the impossibility of retaining the tube in place, the necessity of using a long tube projecting into the pleural space, the expense of operating it, and the fact of the constant negative pressure with it seems to me an attending danger which has prevented my using this device, but I have modified my shield so that this device may be used, thus doing away with the objection of long tube and maintaining in position. But expense, clumsiness and fixed position still remain as objections.

The Open-Wound Method

All authorities, so far as I can ascertain, say that if a pleural effusion is treated by the open-wound method, the pleura will become infected after operation in the great majority of cases, even if not infected previous to

operation, and advise not to open the pleura in tuberculous pleurisy because of the danger of mixed infection.

We are led to inquire why these conclusions are necessary, as we shall all acknowledge that all skilled surgeons open all cavities except the pleural space with impunity and rarely does mixed infection follow such procedures. Go over the subject as we please, study from every angle, and only one conclusion can be drawn: it must be due to difficulty in retaining dressings and the effect of respiratory movement in introducing infected air and reentrance of infected discharge after exit from the pleural space when these wounds are dressed and treated in the same manner as wounds communicating with closed cavities in other regions.

As we pointed out before, to make treatment of pleural wounds as safe as that of wounds opening into other closed cavities, we must find some device that will permit perfect drainage, prevent drawing of discharge back into the pleural space on inspiration, and at the same time cause expansion of the collapsed lung. This device and dressing also, to be as effective as dressings for other surgical conditions, must not irritate or macerate the tissues, but must promote granulation.

As to the tube employed in the older methods of treatment, and in fact in most devices, it was necessary to use a tube long enough to extend into the pleural space a short distance in order to obviate its kinking, which would cause it to slip out of the wound during the effort of respiration.

The comparatively large number of cases of permanent fistula and a longer list of protracted recoveries due to fistulous openings lead us to inquire why this result occurs so often. Why should the large diseased area recover and a small, often pencil-sized, opening remain, with no foreign body present and no pathological tissue there that cannot be removed.

Some Experiments on the Dog

In studying this question, we took a dog and dissected away all the soft structure down to the ribs and also carefully dissected windows through the intercostal muscles down to the pleura. Then the trachea was

severed and a hard-rubber tube with a soft-rubber tube attachment was tied securely into the tracheal opening. The purposes of the experiments were two: first, to study the influences of adhesions in various positions on expansions of the lung and, second, the influence of long and short tubes in producing fistula.

First the lungs were fully expanded by forcing air into the same through the trachea tube. When the lungs were fully expanded, they were attached to the pleura at various levels and in various positions at the same level.

The results of the experiments showed that in the upper half of the lung, adhesions have little or no influence in preventing collapse of the lung after it is expanded or of expanding after it was collapsed; but when we came to the lower edge of the upper lobe, we found that, instead of the lung expanding in a right line from the base of the lung, and when the lung surface came in contact with the parietal pleura, the point was at rest as in the upper portions of the lobe; the edge after touching the parietal pleura slid downward a variable distance, depending on the force used in expansion. The middle lobe expanded in a right line to the parietal pleura, then filled downward to meet the lower lobe; but the upper border of the middle lobe would not rise upward to meet the lower edge of the upper lobe if this lower edge was held upward either by adhesion or a drainage tube projecting into the pleural space, but the lower edge would immediately fill the fissure if the adhesion was removed or the drainage tube was made equal in length to the exact thickness of the chest wall. What was true of the middle lobe was true of the lower lobe; expansion was outward and downward, never outward and upward. Thus we found that the fissure between the upper and middle lobes and the middle and lower lobes must be closed by expansion of lung outward and downward—never outward and upward.

If a fistula has formed, then it must be closed by freeing the adherent border of either the lower border of the upper or middle lobe or both—or by resecting the rib at the lowest point of contact of the lung to the parietal and diaphragmatic pleura and so

allowing the "fixed point" to move upward to permit the upper fixed border of the lower lobe to close the fissure between it and the middle lobe and in turn force the middle lobe upward to close the fissure between the middle and upper lobe.

From these experiments came the explanation of the difficulty, namely: When the drainage tube was allowed to project into the pleura with the trend of the projecting end inward and upward, as it always is by the usual methods; if the tube is in such position that the lower edge of the upper lobe is held upward a variable distance when it comes in contact with the parietal pleura and it is only a question of a few hours until an adhesion forms, and as the lower border cannot move downward and the upper border of the middle lobe cannot and will not move upward to close this deficiency, a fistula results.

The results of these experiments demonstrated the necessity of some device that will enable the physician to use a tube equal in length to the exact thickness of the chest-wall and maintain in position, and still comply with the other necessities of treatment. Devices have been invented having a rigid support to enter the opening in the chest-wall, but they have the objection of rigidity and inability to meet the trend of the incision without causing pressure or irritation of the surrounding tissues.

After many trials I succeeded in devising a simple method of attaching a flexible valve of oilsilk or light metal direct to the end of the ordinary drainage tube, and if so placed this will work automatically and synchronously with the respiratory movements. It can be made aseptic. With a little instrument devised for the purpose the valves can be made quickly by the attending physician. This is a necessity, as new valves must be used at each dressing. This valve meets the indication for: first, excluding air and expelling discharge from the pleural space; second, excluding air, which compels rapid expansion of the collapsed lung. This instrument is manufactured by Truax, Greene & Co., Chicago, Ill.

With the first case in which this valve was used, I had simply the drainage tube wound with iodoform gauze sufficient to fit closely

enough in the opening in the chest wall to permit air from entering around the tube, and was compelled to use a tube projecting into the pleural space. Expansion of the lung was rapid, but the difficulty I have above called attention to caused an adhesion just above the drainage tube, resulting in a small fistula which would not close until I resected a small portion of rib at the lowest point of the pleural space and permitted the "fixed point" to move upward, after which it promptly closed.

In this case the valve was protected from interference from the overlying dressings by building up around the tube with gauze rings. This method, while in a measure successful, led to trouble from displacement, due to movement of the chest-wall, and resulting in interference with the valve and so defeating its purpose.

The Shield for the Valve

I then recognized the necessity for a shield for the valve, in addition to the other necessary instrument above outlined. First a little straight guide with a hook-end was devised to measure the thickness of the chest-wall, and lastly a flexible shield. This shield, made of aluminum or plated copper or silver, meets the following indications: First, to meet and neutralize the movement of the chest-wall in inspiration, when properly applied and under suitable bandage correctly adjusted. Second, it provides for a pivotal attachment of the drainage tube to meet the trend of the wound without a possibility of causing pressure or irritation, or maceration of tissue. Third, permits the use of a tube equal in length to the exact thickness of the chest-wall. Fourth, insures maintenance of the tube in perfect position. Fifth, the discharge drops away from the end of the tube as soon as expelled from the pleural space and cannot in any manner be drawn back into the pleural space.

Finally, in this manner the required conditions are met, viz.:

Rapid expansion of the lung; perfect drainage, preventing reentrance of discharge after expulsion from the pleural space; exclusion of air which may cause mixed infection; automatic action of the valve.

(The patient can hear the valve close with each inspiration and so can be informed as to the condition of drainage); nonirritation of tissues and a direct stimulation to granulation; avoidance of adhesion due to long tube; fixed position of the tube with any angle of the wound without irritation or pressure.

How to Use the Device

In using this device, at the time of operation have the tube (wound with iodoform gauze) and valve ready before beginning the operation. If possible, do not open the pleura until the ribs are resected and closure sutures are inserted, leaving an opening just large enough to admit the tube wound with gauze. In recent cases, now open the pleura and push the tube in place, allowing accumulation of whatever character to drain through it. In this manner the lung will expand as rapidly as the escape of the discharge will permit expansion and no air will enter into the pleura.

In old fibrinous cases and cases resulting from dry pleurisy, this procedure will not be possible; but in many of this class of cases, by damming the wound with gauze and by putting gauze rings around the examining finger and pushing close to the chest-wall while removing adhesions or fibrinous deposit, air can be excluded in many cases.

The question of removal of fibrinous deposit is open to discussion. Personally, I remove all deposit. The question of washing out the pleural space is also open to discussion. Personally, I treat the same as other wounds and abscess cavities. If there is no fibrinous deposit I do not irrigate. If there is, I often paint both parietal pleura and lung-pleura with the compound tincture of iodine and have never seen any bad results from it.

I have never had occasion to use the bismuth and vaselin treatment, as I have had no fistulas since the discovery of the method by Dr. Beck, the device and valve having been completed for my own use a short time before the announcement by Dr. Beck. It seems pertinent to me to enquire why there should be fistulas in the large majority of cases if competent diagnosis is made and early adequate surgical treatment is instituted.

The accompanying illustration shows my device in position. The method of applying is as follows:

1. To make the valve, use the best quality of oilsilk. The valves may be made in numbers by folding the oilsilk on itself a number of times and cutting with the punch furnished with each device.

2. To attach the valve, use fine silk thread and a round sewing needle. Place the valve on the end of the drainage tube and pass the needle through the valve just at the inner edge of the drainage tube and out through the



Showing Dr. Dean's apparatus

wall of the tube, then up through the oilsilk exactly at the outer edge of the tube; tie over the silk with a square knot.

3. Insert the pin through one of the openings in the ears of the device and then through the drainage tube just enough below the valve, to leave the valve free from interference, and then through the opening in the second ear of the device.

4. Wrap the free end of the drainage tube with 5 percent iodoform gauze, to make it fit snugly into the chest-wall opening after insertion.

5. With the little guide measure the exact thickness of the chest-wall by passing the bent end of the guide through the opening in the chest-wall and pulling against the pleural surface, then marking on the guide at the surface of the skin; thus indicating the exact thickness of the chest-wall.

6. Now lay a pad of sterile gauze on the under side of the device, after cutting an opening to admit the tube, measure the length of the tube beyond the under surface of the gauze as indicated by the guide, and cut off the tube at that point.

7. Pass the straight end of the guide through the opening in the wing of the device, lift the valve and pass it through the drainage tube and so into the opening in the

chest-wall, and push the drainage tube and attached shield into place.

8. Attach the elastic band to one of the hooks of the shield, pass around the body and attach to the hook on the opposite end of the shield. Shorten or lengthen the elastic strap, as required, by means of the slide buckle; making this strap just tight enough to maintain the shield in its proper position but not so tight as to give a sense of constriction.

9. Over all place gauze and cotton and a binder to hold in position. It is well to pin slightly tighter at the upper and lower edge of the wing of the shield than over the wing, as this method aids in maintaining in position.

The Woes of Mexico

By ROBERT GRAY, M. D., Pichucalco, Mexico

EDITORIAL NOTE.—Dr. Gray has resided in Mexico for many years, where he has lived and practised among the natives. He knows them intimately. He understands them. Few men are better equipped to diagnose the present "woes of Mexico," in which we are all so acutely interested at the present time. While Dr. Gray's article was written before the troops of the United States were sent to the Mexican boundary, it throws much light on the condition that apparently made this somewhat heroic remedy necessary.

Strange—that where Nature loved to trace,
As if for Gods, a dwelling place,
There man, enamour'd of distress,
Should mar it into wilderness.

—BYRON.

A MERICAN and Mexican strenuous relations, intensely strained by recent complications which distressingly blend with old scores, and are more or less aggravated by infamous contributions entitled "Barbarous Mexico," imposed upon publishers in the United States as a true portraiture of existing conditions in this republic, furnish a theme of startling importance and one that should have serious consideration in the United States.

Natives Inimical to American Industries

There are more than fifty thousand American citizens resident in Mexico, and more than a billion dollars of American gold are invested here, the security of which depends

upon internal peace under the administration of a stable government.

The virulent demonstration against, and spirited attempts to attack, Americans in the leading centers of this country, by students—an element certainly representing a degree of intelligence far above the average—indicates an undercurrent of popular sentiment decidedly unpleasant for life and interests liable to become subject to its delirious caprice, were this freely unbridled; and the revolutionary hostility the existing government has been forced to quell by the strong military arm serves as a loud tocsin of warning that civil convulsions may en throne a horrid reign of unsparing anarchy when the present genius of government and prosperity is no more at the helm of national guidance. And how much more may be expected of a man now past four-score years? The goading memory of the spoliation of

Mexico entailed by the former war with the United States still rankles in the Mexican mind—an irrepressible sentiment of dissatisfaction.

Some Causes of the Discontent

The Mexican government bid high for American capital and enterprise, to develop the prostrate and impoverished country, granting concessions and other inducements of an extraordinary character—the impetus that put a network of railroads over the face of the country, and established factories equal to those in Europe and the United States. The magnificent systems of railways, telegraphs and telephones that have thus been created as it were by the magic touch of the enchanter's wand enable the government to know almost instantly where revolution is brewing and to concentrate promptly the force necessary to control the turbulent element.

Naturally, there are Mexicans who do not pause to consider that such progress could never have been made by Mexico without a credit impossible to be obtained except by a strong and stable government, yet who imagine that all existing development should be the unencumbered property of the native people. Then, to aggravate this situation, there are many aggressive, irresponsible Americans, overbearing and abusive, who show their scornful contempt for the natives, demonstrating their feeling of superiority, not only in acts, but in words, insulting and domineering; men employed in many phases of the various industries, not owners of anything but their uncultured deportment and vulgar tongues; people unknown in the upper walks of society and officialdom of the Republic; men who are a disgrace to the American name.

The poor natives thus maltreated are sensitive and resentful in spirit, although apparently humble in their helpless slavery to circumstances. These are the productive bone and sinew of Mexico, but the very element that crafty leaders of sedition might inflame and employ to wreak havoc on Americans and their investments amid the chaos of anarchy that would follow in the wake of the wreck and ruin of the present inflexible authority. The students are of a

class more rational and temperate, yet they never have reflected as to the possible consequences of their rashness, to themselves or their country. The poor insulted and abused Mexicans would be more inebriately insane were they once started on a career of rapine and devastation.

Such are the dormant embers of local peril smoldering in the tranquil ashes of submissive impotence—impotent for want of available opportunity—with which American life and property may have to reckon at short notice when the protecting authority that sways the destiny of state so auspiciously today is at an end. It would be a poor source of consolation to those thus exposed that the government of the United States would make a fearful settlement with the perpetrators of lawless outrage after the dread deeds were performed.

Restraining Influences Required

Something should be arranged in advance to modify the intolerable conduct of those irresponsible Americans, something in the nature of a practical admonition or whatever might be proper on the part of the government of the United States, which has no direct jurisdiction, but still holds some measure of restraining influence over its subjects in foreign lands, who perchance might heed an intimation that they are needlessly provoking an embarrassing complication. Americans here may aid immensely in turning from themselves and theirs an avalanche of vengeance, should such terrible day dawn upon them, but which neither is to be expected or possible while there is a strong, respected government in control.

The situation is one that vitally interests Americans at home, whose tranquility and prosperity might be injuriously disturbed by a Mexican revolution gaining strong headway; for the massacre of their countrymen here and the destruction of their property could not be patiently ignored. And any intelligent American can well imagine the cost of redress.

The government of the United States should inexorably require the peaceful formation of a government to succeed the present one, and protect it with powerful moral force

against revolutionary disturbance. If those prone to revolution know in advance that the United States will permit no lawless move against the peaceful authority here, the attempts to destroy the government here will not be made.

American Sympathy Basely Solicited

Americans and Mexicans were guessing wildly at the motive actuating the costly preparation of "Barbarous Mexico" for publication, even imagining that some conspiring syndicate in the United States thus designed to involve Mexico in trouble with the United States, on the score of the reputed slavery established and maintained. It was supposed that American investors were aiding and abetting this crime against a nation to benefit their interests, paying both the American and Mexican governments liberally for their respective services in negotiating for them the mastery over the laboring peon class held in abject slavery, picturing the conditions in colors more abhorrent to humane sentiment than African slavery ever had been in the United States, and almost as revolting as was the lot of the Cuban pacificos in their concentrated encampments.

The prospective revolutionary patriots knew that the popular sentiment in the United States had freed the negroes and liberated the Cubans by force of arms. So they fondly expected to create a strength of sympathy in their own favor in a struggle with the "despotic and enslaving" government they represented Mexico to be groaning under, to a degree at least to secure to themselves the moral support of the great majority of the people, and ultimate recognition by the government, after some successful campaigning. This they probably anticipated would be easy of attainment, with the help of the federal army they counted on as a certainty at the very inception of the revolt. And there is now no doubt that they believed that twelve Mexican states would join them at once, almost in mass.

It was these men who furnished the skeleton outline of "Barbarous Mexico" to those who dressed up and inflated the preposterous incidents and circumstances, and paid the expense outside of those de-

frayed by the publishing houses that gave them to the light of day. It may be possible, of course, that the contributors were duped to accept these stories as the literal truth and that thus the publishers were likewise deluded. At any rate, the enterprise was a brilliant success to the point of what the publication of infamous falsehood could accomplish.

The Mexican Government

Falsehoods spread about this government have no doubt made unfavorable impressions among the people of the United States, maybe to such an extent even as to create a considerable measure of undue sympathy for the revolutionary movement. The present regimen was inaugurated when the country was a complete revolutionary wreck, with only a few leagues of railway, without factories, with no systematic agriculture, no organized commerce and no stable credit, and with the highways and byways teeming with bandits.

Today there are in Mexico thousands of miles of railways, hundreds of factories, ample agriculture, incredible mining wealth, gilt-edged credit, no bandits, while an extensively, well-planned and formidably designed revolution has been put to rest with seeming little effort, the hostile array begin so impotent in warlike preparations and feeble in numbers as to be able to offer no semblance of well-contested battle.*

These facts should satisfy the people of the United States that the existing government has been not only the resurrection and the life of Mexico in the past, but is its present salvation—an utterly impossible task for an incompetent and vacillating administration. And these are the reasons why the government in power has been continued, term after term; the progressive Mexicans, whether friendly to it or not, well knowing that no other prospective authority would give them security against the ravages of revolution. Naturally all the influence that foreigners could exercise was brought to bear to maintain such a stable government in power.

But the government of Mexico is no more despotic than that of the United States, and

*This paper was written before the development of the present Mexican revolution, in which we of the United States are so much interested.

has a reputation of tyranny only because the loud railers against the President, bandits and professional revolutionists, can not commit depredations as they please.

In this vast region where I make my home we do not know that there is in existence any form of government, save when some crime calls the authorities into this rural district, or when the time comes for collecting taxes. There is no soldier, rural guard or policeman within a radius of twenty-five miles from where I write—the most peaceful, orderly domain on the Continent. Not one revolutionist appeared and no arrest was made; and while there are here thousands and thousands of the class that seditious leaders count upon to rise against the government, not one soldier has been sent in here to overawe any prospective uprising in this locality.

There are fifty such *imaginary* "revolutionists" for the one whom Madero would regard as being loyal to the government. And what is here affirmed from personal knowledge was the condition for a hundred miles in every direction from this place—neither rebels nor soldiers in such a vast territory.

The same is true all over the republic, save in the few places where the standard of revolt was raised but without attracting the cooperation of the local inhabitants, the disturbers of the peace being mere free-booters, out for plunder, save now and then some deluded leader who may have truly believed that the people of Mexico wanted the proposed revolution and would flock to its encampment almost to a man. Many foreigners and quite a goodly percentage of Mexicans had some suspicion that the army might abandon the colors of the government—which would have been embarrassing—but this want of confidence was unjustified, for the faithfulness of the troops was admirable.

It is now almost an established certainty that we shall have prosperity and peace to the end of the new administration, as the vigor of the President justifies the hope that he will have ample natural force to sustain him in active service ten years longer. Possibly, meanwhile, influences may be so wisely employed as to avert armed violence

after Diaz retires from the helm of the ship of state he so effectively steers.

The Yaqui and Maya Indians

Americans have little right to criticise Mexico or any other country about cruelty to savage tribes of Indians, if they will but reflect a little on the fate they have meted out to the native red man. The atrocious ravages of the Comanches were perpetrated for many years, in the lifetime of many people now living, and were only terminated since I was comparatively an old man. The Yaquis and Mayas deserve all the severe treatment that the government of the United States was forced to adopt for the annihilation of the Comanches—"subjugation" would be too mild a term. Mexico has been more patient and forbearing with her blood-thirsty wards; but it has found, by sad experience, that there is no pacific remedy that can lure them to be peaceable, law-abiding people.

In the State of Sonora, where the Yaquis have their reservation or, more properly, their all but impregnable refuge, there are rich mineral deposits that lure American prospectors into their savage power.

Now please listen to this. There are millions of big red ants that live and breed in the ground, the most voracious known to man. Some who have been so unfortunate as to become prisoners of the Yaquis have been securely bound, nude, near a nest of these gruesome ants. Not a minute elapses before their skin is broken and their flesh is wrenched off, little by little, by these insects, and carried into the hive; it is the most excruciating and long-lingering death ever suffered by man. And thus the slow and relentless process continues until nothing remains but the clean and polished frame-work of bone. And American periodicals have their pages prostituted with the accusations that the Mexican government deals barbarously with such fiends in human shape!

Mexican Elections

I am the physician of the big American Rubber Plantations and of some native ones in this belt, and was the physician of hundreds of families, at one time and another,

before there were any rubber plantations. Hence I am intimately acquainted with hundreds of voters, having resided in this Department during every election held that made Diaz president. And I personally know that there were never Federal, State nor municipal marshals at the polling places, nor other person challenging voters or striving to influence any voter. All this notwithstanding, at the late election Madero received barely two percent of the votes cast, although every vote polled might have been for him had each voter possessed the will so to vote. But I know a number of men not in favor of Diaz's government who voted for him simply because they have no faith that a new administration, with an untried and inexperienced president, would assure them the same protection in person and property they have so long enjoyed.

As to Mexican "Slavery"

Slavery in any form or under any condition, to my sensibility, is the most odious enthrallment that has ever been imposed on mankind. I have reason to hate slavery with all the intensity of my ardent southern nature—the relentless curse that estranged me from my native land, transforming the old homestead to a desolate waste, putting all my family in the churchyard solitude or amid the intermingling dust of the battle-storm.

But the enslavement so industriously denounced does not exist today. Mexican peonage is not slavery. All labor in Mexico is paid for, the money going to those who perform it. On plantations the wages, which are paid weekly on some, monthly on other plantations, with rations, are from eight to fifteen dollars per month; besides free medical attendance on these American places and on some Mexican ones. On the American place where I am writing, the laboring people have more than five thousand bushels of corn and plenty of beans, pumpkins and bananas, which they were permitted to plant, although their regular ration of corn and beans is all, and more, than they can consume. Also they have hogs, turkeys and chicken. And the peons on the native places have practically the same ample provision for their needs

Any man who wants to change his employer may go to the local authority and get an order to his employer to liquidate him; and, in case he is in debt, he takes the liquidation to his proposed employer, who sends the money to pay his debt. Then he moves to his new employment. If he does not owe anything, he moves at his pleasure.

A large percent of Mexican farm laborers make it the grand study and enterprise of their lives to run into debt, with no dream of ever paying. Some never get into debt, and gradually save money to buy themselves little homes, thus becoming enfranchised citizens. Any laborer may thus gain the franchise; and those who never make the effort are unworthy of it, there being no country in the world where it is so easy for the very poor to economize and own homes when the will exists. But the happy-go-lucky shiftless debtors would rather buy a quart of rum Saturday nights than to own homes and raise families in some semblance of decency.

This is all there is to the great hue and cry about Mexican slavery. The miserable houses and rag-tag appearance of the people at work might naturally impress a stranger with the suspicion of servile bondage; but very close duplicate scenes may be found among the freeholders, the climate being so generous to the poor children of Nature. I own no undershirt nor overcoat, and have no clothing other than of cotton drill; nor do I sleep under a sheet fifty times in a year. Few poor people in the United States, depending exclusively on their labor, are as well off, physically, as these indolent Mexicans—applying this term to the necessities of life and the requirements of toil to possess them.

The Natives the Victims of Their Vices

The scourging curse of these native Mexicans is the bane of their consuming vices, that put half of them into premature graves, and render most of the other half the easy prey of the ever-prevalent diseases. At the present rate of destructive race decline, scarcely more than another century will be required to exterminate this interesting native population—interesting, because they are the mysterious progeny of recordless

Time; a people who sprang up among the graves of dead and nameless nations, so long ago that no fragment of perished traditions remains to hint whence they came or how long they were here, the hapless slaves of cruel masters, long before the gold-thirsty Spaniards came to intensify their thralldom of unmerciful servitude.

The majority of the children eat dirt and die before they attain the age of puberty. Nearly all the male population above ten years drink new rum, and men and women all use strong Mexican leaf tobacco excessively. But for their vices, the people would not be sickly. The children are healthy till they get among the dirt-eating classes. I have cured many by convincing them that I should put them in the graveyard, with the dead, if they tasted dirt again; and that I could tell by a glance at their eyes if they had eaten but the smallest portion. The positive cures have been about ninety percent. They grow healthy and plump in a short time after abandoning the vice. But the class, as a whole, is a hopeless proposition, and it might become an exceedingly dangerous one if once it arrayed itself against the propertied classes.

These people are in a high degree imitative, and learn delicately complicated industries with surprising promptitude. They become expert weavers of textile fabrics, and are unsurpassed adepts in fancy needle-work; they also would do good drawing and painting, with any liberal show of opportunity, as numerous examples clearly demonstrate. But their memories are defective. Their thinking and meditating faculties have been dwarfed and blighted by the long dark ages of slavery that have wrought their pathetic destiny.

One could write on and on indefinitely about these poor, degraded specimens of hapless humanity, their lost birthright, their aimlessly hopeless existence, their woeful tragedy of moral and physical possibility, and the waste, howling desolation of their immortal heritage, if this must be measured by the strict rule and square of Christianity. They are Catholics by hereditary bequest, and baptize their children; but yet they loathe the church and believe in none of its precepts or promises. They

remember and cherish the wrongs their ancestors suffered at the hands of the priesthood, and will never forgive them nor love the church.

American Homes in Mexico

Thousands and thousands of doctors have written me about the practice of medicine, homes and investments in Mexico; and I take it for granted that many people not of the profession would like to know the truth about this country, as a place of residence or investment.

My more than forty-five years' residence here has given me something more than a mere superficial view of the inward mysteries and enchanting allurements of the "Magic Realm of Mexico," which I cheerfully share with the people of my native land, that I shall nevermore see.

Mexico is shrouded in a gossamer halo of mystery so intense and luring as to startle and hold spellbound anyone who presumes to meditate her undiscoverable marvels in absorbing thoughtfulness. What she was ere the Toltec and Aztec nomads first roamed over the throbbing dust of the dead and nameless nations that perished when "The Lost Atlantis" was engulfed, is a maddening theme, because the silent solitude that hovered over the tomb of the dead world lent no glint of guiding light that could live through the long and dismal night of recordless centuries, to illuminate the research of this pulsating age of enlightened progress. Goading imagination recoils from the baffling quest.

Putting the vague and unreliable scraps of Egyptian tradition, that have been transmitted in fragmentary remnants of Plato's reminiscences of what he learned from Egyptian priests—practically librarians—about the existence and the disappearance of "The Lost Atlantis," with the indubitable evidence of the universal destruction of this continent, everywhere unmistakably visible, we may hesitatingly conjecture what transpired: that the shores of "The Lost Atlantis" repose beneath the surge of the mid-Atlantic flood; that the islands that loom above the restless Atlantic tide were mountain summits and lofty plateaus of tablelands of the engulfed realms of the continent,

that remained above the enthralling wave which swept over the more depressed belts of intervening land; and that the shock was so horribly annihilating that all life was blotted out and the cities wrecked, on all the continent that was not hurled down into the watery tomb; and thus came the puzzling ruins scattered far and wide, from the Mexican Gulf and the Atlantic to the Arctic Circle: "The tombs of dead and nameless nations."

Such ruins are to be seen, in not remote distances, from the Gulf marshes to the highlands of Mexico, almost anywhere one may turn to seek them; and they tell a mournful story, in their silent eloquence, of hopes that have fled and loves that are dead:

Here, where nameless solitude
The very atmosphere has imbued
With a solemnity so profound
That all seems holy, consecrated ground;
Whose monumental shrines, heap'd and pent,
And tumbl'd temples, with their arches rent,
And marble palaces crumbling into dust,
All Retribution's trophies, accurst.

This dreamy mysticism is ample to entrance the prying mind and sink into the feeling depths of the polished bosom of any investigating son of science, whose intrepid steps may tread these weird solitudes amid the purple gloom of lugubrious midnight, beneath the pale gray starlight of the tropical sky, the most splendid constellation that ever beams above accurst mankind.

Turn over the leaves of history till a pensive eye lingers with longing fondness on the pathetic story of this fair land of the sun, from the advent of Cortez to the quelling of the recent revolution, above the graves of whose dead the sods of the valley are not yet dry, nor those red, weeping eyes of the plaintive bereaved, and the most interesting stage on earth will gradually become uncurtained to view.

The Past and the Present

How deplorable that the dread, dark curse of the past should yet enthrall all this natural loveliness, and blight and mar the fair domain till it should become the un-reached Paradise of despair; for it has the attributes of a Paradise to mock and outrival the fabled Eden of days of yore. Were conditions here what they are in Florida or

southern California, as to ingress of settlers from abroad, those winter Edens in the United States could never approximate a remote comparison with the possibilities of making a perpetual Paradise, immune from frost, every product of those favored haunts of fickle summer in December and January flourishing in dark luxuriance here, with every tropical exotic no one would dream of planting there. Although the torrid sun flings intense vertical rays over the earth, the heat is never so oppressive as it is anywhere in the United States in July and August, seldom passing ninety in the shade, any one being able to work all day; while the nights are always refreshing.

The land is rich, heavily timbered, and exceedingly cheap, compared with inferior quality in the cold belts of the United States. Nowhere on earth are there such vast stretches of virgin soil invitingly promising to poor families, dependent on personal labor, to make an easy and comfortable living; lands that might be bought for five to ten dollars an acre. But there is no market for any product other than rubber, cacao and live stock, for want of transportation, garden truck having no value other than for home consumption that makes food for the family all the year, the chickens and eggs that may be sold affording money to buy other indispensables while the rubber and cacao are developing. There are no roads but bridle trails, often almost impassable, even dangerous.

American Women Dissatisfied in Mexico

But the great and burning question for Americans to consider is that they are unpopular with a large class of Mexicans; and that American women are never satisfied here. They dislike the people and cannot conceal their antipathy; they cannot tolerate Mexican house servants; they do not understand the language and will not try to learn it; and they strive to pass half their time visiting their families in the United States, keeping their husbands struggling to provide funds to meet such extraneous expenses. It seems to me that they cannot resist the impelling influences that actuates them to cherish sentiments of discontent. Their homesickness seems to be a malady they have

no will-power to resist. Everything is strangely unnatural to them. They pine for the social pleasure of their native land.

For these reasons it were better that American families do not come here, unless in a large colony; and there is an objection to this, founded on American social exclusiveness, that provokes unpopularity among the better classes of the natives.

Single Americans may do well by marrying native women and blending their destiny with that of the country. But if men of families desire to create productive agricultural enterprises they should come without their families—positively without the female members. A number of such men might combine and buy and develop a joint-interest plantation, the same as the big rubber places here were made and are operated, the families of the owners never having been here, the men coming but once a year for a month or so, while the operations are conducted by a foreign manager and native foreman. But one of such combine needs must remain here much time.

Mexican Investments

Improved native places may be bought on liberal terms that would pay good dividends from the start. The place where I write was thus bought by three or four Americans and will pay for itself under their management twice before the last payment is due. None of them remained a month, at the start, and but one has come on short yearly trips since. Another big place, of a million rubber trees, was made from wild land, by two American brothers-in-law, the single one staying most of the time till the last trees were three years old; but he has been away nearly a year.

Have nothing to do either with plantation stock or land shares of any such as may be offered for sale in the United States, as all such investments will prove a total loss.

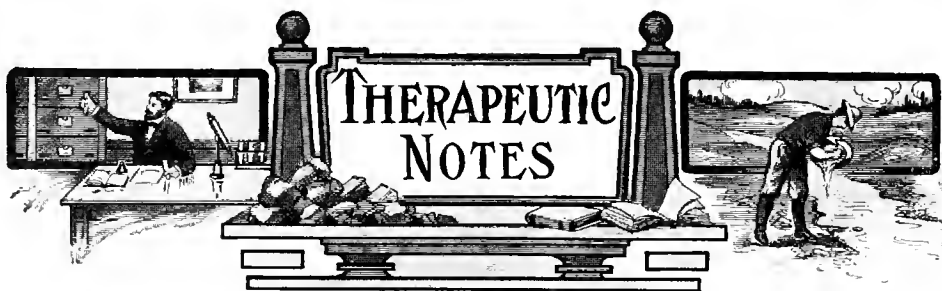
See the goods before you buy anything in Mexico, whether from native or American exploiters.

Rubber at twenty-five cents a pound, gold, would pay more per acre than any farm product, planted on a large scale, pays in the United States, three crops per year being gathered under the American process. Rubber is now one dollar a pound, gold, on the plantation, and has been worth more than twice as much in 1910; and is not likely to run below fifty cents in many years. Almost any native plantation may be bought, that would pay a dividend at once, probably cheaper than it would be made from wild land, counting the delay of seven years to attain the productive stage. Most such native places yield paying crops of cacao and have pastures for stock raising. There are dozens of such places in the great rubber and cacao belt; and wild land of equal quality by hundreds of thousands of acres.

It would be impossible for me to give any personal information beyond what is herein contained, as my time is occupied. But those who may desire to investigate would have no trouble about finding the great rubber and cacao belt. And I wish to repeat: do nothing without a thorough personal inspection before parting with any investment funds.

The grand imperative duty of the people of the United States is to make a wise effort to conciliate whatever unfriendly sentiment that may be prevalent in Mexico, if not for the hapless sake of hostile natives, then for the better security of Americans whose lives and destiny are inextricably blended with Mexican destiny. If the government and people of the United States would make a supreme effort they might materially modify if not absolutely counteract any probability of another revolutionary demonstration, now improbable during the administration of President Diaz.





COMBINED EFFECT OF ANESTHETIZING REMEDIES

A. Schoff, reports, in *Therapeutische Monatshefte* (Nov. 1910, p. 635), some experiments made on the ischiadicus of the frog and of the rabbit, at first with a mixture of cocaine, novocaine, tropacocaine and eucaine, then with a mixture of these remedies, together with strophanthin, adonidin, and periplocin, finally with mixtures of the substances of the cocaine group, also with morphine, strychnine and veratrine. [Talk about confusion of mixtures!—ACHARD.]

The experiments showed that the effect of a combination (two remedies of the cocaine group) is more intense than should be expected from the respective doses, and that a particularly severe or marked effect was obtained from combinations of cocaine with strophanthin or adonidin, and from combinations of cocaine with adrenalin.

ATROPINE IN DYSMENORRHEA

Drenkhahn in a German gynecological journal, reports a number of severe cases of dysmenorrhea, especially those of the spasmodic variety, which he has cured by introducing one milligram of atropine in one Cc. of water, introducing it within the cervix. If he had no speculum or syringe he would saturate a very small cotton wad and moisten this with a one-percent solution of atropine and press it far back against the posterior vault of the vagina. This simple measure has proven very effectual in many of his cases. He believes this is due to the fact that atropine paralyzes the auto-muscular action of the uterus and reduces its mechanical excitability. This was Shinder's theory after experimenting on animals.

In cases resulting from congestion alone, says Ellingwood (see *Therapeutist*, Feb., 1911) the atropine has a tendency to cure chronic cases satisfactorily. The use of mild sitz baths or hot vaginal injections when not contraindicated, prior to the use of the atropine, may conduce to its satisfactory treatment

ASCLEPIAS COMPARED WITH BRYONIA

"I have called attention," says the editor of *Ellingwood's Therapeutist*, "to the resemblance in the action of asclepias and bryonia in their effect upon serous membranes. I am convinced there is a great deal of resemblance. I think the bryonia acts upon the circulatory condition, while the asclepias influences more particularly local conditions, dependent upon the condition of the serous membrane itself. They can be well combined and in many cases it would be found that asclepias is preferable to the bryonia, but in the acute pulmonary cases, bryonia is superior, as its influence is wider, while in those cases in which the serous membranes themselves are alone involved, asclepias has its field."

THE MENACE OF THE RAT

The rat is certainly looming up as a destroyer of property and a potential destroyer of life. So says the *Medical Times*. Many million dollars' worth of grain and other food are eaten annually by them. The farmers of the Canadian wheat belts have become especially alarmed; the rats have reached Winnipeg, and radical measures for their extermination are being early discussed. In the Pacific Coast cities they bring on, at any time, a plague epidemic manyfold worse and

more deadly than fire and earthquake. In this connection, *The Evening Post* says:

"Traps, cats, poisons, and other methods of extermination are being tried. But will man be able to outwit this animal whose intelligence is equal to its aggressiveness? Trappers in particular have reason to deplore the rat's cunning. Who has not, after catching one, come to his trap, day after day, week after week, without finding another victim in it? Yet there is a way of tricking them. Scatter dead leaves over the trap so they cannot see it, and the smell of the bait will lure them to sure death."

NUTRITIVE SUPPOSITORIES

Rectal feeding is very unsatisfactory and cannot supply sufficient nourishment to keep a patient alive; nevertheless, it often will tide him over such acute conditions as hemorrhage of the stomach, when absolute rest of the stomach is necessary.

The chief objections to nutrient enemata (abstract in *Merck's Archives*, Dec. 1910, p. 406) are their low caloric value, the inconvenience of administering them, and the necessity of first washing out the intestines. Even with all possible precautions, they are often not retained, because of their bulk. Frequently they will also lead to the formation of an excessive amount of gas and thus cause colic and tenesmus.

It would be almost impossible to give such patients any nourishment at all, were it not for the fact that Boas has found that sufficient dextrin, crystallized egg-albumin, salt, and cacao butter can be introduced in the form of suppositories for nutritive purposes. These suppositories are indicated where there is excessive irritability of the rectum, in carcinoma, volvulus, intussusception, and the like. The lack of water may be supplied by saline injections into the rectum or under the skin. Absorption usually requires from three to four hours.

THERAPY OF HEAT AND COLD

The Medical Era (Dec., 1910, p. 495) says that the cold-pack for an acute laryngitis or tonsillitis, maintained for an hour, or for two or three hours—according to the results

obtained—often proves very helpful in checking the inflammation and in giving comfort to the patient. In some cases the cold is not well tolerated, especially in young children, and the use of a hot-pack gives very good results without the previous employment of cold, although, where it can be done, the cold should precede the heat for a short time.

An objection to the use of either the hot or cold wet-pack to the throat of a child is that it may tend to chill the surface as soon as the first effect is gone; also, that the clothing gets damp, and the child is in danger of "taking cold" from the use of the water.

While the danger from this latter source is greatly overestimated, it is still a fact that in the hands of the untrained attendant it is a real objection; but even under these conditions the application of the heat or cold may still be made by using a rubber water-bag, which offers a solution of this problem. It may contain either hot or cold water, and any temperature short of boiling water may be secured.

THE INTRAVENOUS AND SUBCUTANEOUS ADMINISTRATION OF SUGAR

The *Deutsch-Amerikanische Apotheker-Zeitung*, for February cites a German contemporary to the effect that intravenous and subcutaneous injections of grape-sugar are now administered unhesitatingly in desperate cases in which the stomach is incapable of serving for the introduction of a sufficient amount of food. As much as 1,000 Cc. of a 5-percent solution are well borne intravenously, and may be repeated daily. It is necessary, of course, to use the purest quality of grape-sugar, dissolved in physiologic salt solution and sterilized.

It is well to begin the injections with a 2-percent solution, increasing the sugar-content gradually to 5, 7, and even 10 percent. Kausch recommends, in proper cases, the addition of from 4 to 8 drops of adrenalin to the solution when intended for intravenous administration.

It is of interest and importance to note that the patient can tolerate more grape-sugar in proportion as his nutrition diminished. One woman seriously ill with puer-

peral sepsis was saved by daily injections of 2900 Grams of a 10-percent solution. In this case, only 0.2 to 0.3 percent sugar was eliminated as such in the urine. It is possible to supply in this manner from 300 to 500 calories to the organism.

PERMANENCY OF DIGITALIS

When digitalis leaves, just gathered, are crushed and dialyzed, the colloids are removed, and the simple addition of glycerin and alcohol makes a preparation that retains its strength for years. This is proven by the tests made by Focke, the celebrated authority on digitalis, who found this dialysate—or digitalysatum as it is better known—of exactly the same strength during eight years after its manufacture. He also standardizes the preparation by physiological tests, so that any certain dose always is of the same therapeutic power. During all these eight years of its use in general practice, there has never been reported a single case of accumulation; which can not be truly said of the usual forms of digitalis and its derivatives, including even digalen.

Digitalysatum is well borne also by children, and is very prompt in its effects; though for emergency cases it is advisable to inject it subcutaneously or intravenously. Injection into the muscles is not attended by unnecessary pain, and abscess and infiltration do not result. For injection use, a normal salt solution is preferred, which is termed sterisol digitalysatum.

Digitalysatum has the full digitalis-action. Small dosage, accuracy, lack of toxicity in therapeutic doses, rapidity of action, together with the features already mentioned, are the advantages claimed for it.

QUASSIN

Compardon found that quassin in moderate doses increased the secretion of saliva, bile, urine and perhaps the milk. It aroused the action of the digestive muscular fiber, that of the uropoietic apparatus and of the bile-ducts, augmenting mucous secretion and facilitating the excretion of normal secretions. With the sick, as a bitter tonic it arouses the appetite, renews the forces

and facilitates normal excretion, rendering defecation easier and hastening the expulsion of renal and hepatic calculi. In doses exceeding gram 0.15 it determines symptoms of intoxication, local and general, with nausea, vomiting, diarrhea, vertigo, febrile agitation, cramps and convulsions; remedied by chloral internally and chloroform externally.

CREOSOTE IN PULMONARY TUBERCULOSIS

Conrad Martin (reviewed in *Therap. Monatsh.*, Oct., 1910, p. 566) claims that creosote is a specific in pulmonary tuberculosis, and should be employed systematically at intervals, of from three to five weeks, with omissions of from three to nine weeks. Martin claims that the omission of creosote in the treatment of pulmonary tuberculosis is a serious error. He recommends especially creosotal, guaiacose, and guaiacol carbonate, the latter in the following formula: Guaiacol carbonate, balsam of Peru, myrrh, of each 2 Grams, to be made into 50 pills. Of these, 2 pills are to be taken three times a day, half an hour after meals.

ANTISEPTIC POWER OF ESSENTIAL OILS

Since the therapeutic value of the different essential oils depends more or less upon their antiseptic power, a research recently made by W. H. Martindale, and reported in the November number of *The Perfumery and Essential Oil Record* (London), is of special interest to physicians.

Dr. Martindale examined twenty-six different oils, by a modification of the Rideal-Walker test, to determine their "phenol coefficients," i. e., their antiseptic power as compared with phenol. Agar cultures of the bacillus coli communis were used as the test organisms.

The results are interesting, and rather unexpected. Oil of origanum heads the list with a phenol coefficient of 25.76 (in other words it is a little more more than one-fourth as strong an antiseptic as carbolic acid); next on the list are thymol and carvacrol (caraway-seed oil). Cinnamon oil is well down on the list, varying from 7.1 to 9.6,

according to variety and source, and the oil of cloves has a coefficient of 8.88. Winter-green oil has a coefficient of only 4.64, and the oil of eucalyptus globulus, so high in popular estimation, takes a still lower position with 3.55. Another point brought out in the research is that cinnamon oil does not owe its antiseptic power to cinnamic aldehyde, as the aldehyde gives a lower figure than an oil containing 52 percent of this constituent.

THE TREATMENT OF AFFECTIONS OF THE LOWER COLON

Ernst Rosenberg (reviewed in *Ther. Monatsh.*, Oct., 1910, p. 571) treats chronic catarrhs of the lower colon principally by dry applications of a mixture of tannin and magnesia or of sozoiodole zinc, xeroform, and so forth. These powders are insufflated by means of a long tube. The flushings which were formerly employed are not lauded by Rosenberg. In ulcerous conditions he recommends sponging with hydrogen peroxide followed by the application of solution of silver nitrate.

DIGIPURATUM—ANOTHER DIGITALIS PREPARATION

This is a new product, introduced by Knoll & Co., two years ago. Digipuratum is a depurated extract of digitalis leaves, diluted by the addition of sugar of milk as an excipient, physiologically standardized, thus being made equivalent in dosage to a superior quality of the leaf.

The dried drug is said to include 85 to 90 percent of inert or therapeutically undesirable substances, including a very small amount of digitonin, which may act as a gastrointestinal irritant; these substances are removed in the manufacture of digipuratum. There are accordingly left behind in the product all of the desirable digitalis glucosides, including digitoxin and digitalin, and the undesirable elements are excluded. The action is, therefore, the same as that of digitalis itself, though it is claimed that it is less liable to disturb the stomach.

Digipuratum is soluble in alcohol and very dilute alkaline solutions, even as low as one part in one thousand of soda. The dose is a grain to a grain and a half. It is physiologically standardized on frogs according to the method of Gottlieb.

It is interesting to note that Hale, of the Hygienic Laboratory at Washington, in his examination of digitalin and its products, found digipuratum a very uniformly potent product.

A DISINFECTING WHITEWASH

Now that we are beginning to think about the spring clean-up, says the *Bulletin* of the Chicago Department of Health, a suggestion for a good cleansing and disinfecting wash for courts, area walls, stables, etc., is in order. For ordinary purposes the well-known lime-wash will be found excellent. It is prepared from freshly slaked lime as follows:

Take 1 ounce of the lime to 5 gallons of boiling water, adding as you stir, one teaspoon (level full, not heaping) of table salt. This will make a wash of proved germicidal power, killing most germs, effectually sealing them in when used on dry surfaces.

The United States Government formula for a whitewash, where in addition to the cleansing effect durability is desired, is

Slake half a bushel of lime with boiling water; cover for an hour; strain through a fine sieve and stir in a peck of salt dissolved in enough warm water to do the work thoroughly; boil three pounds of rice to a thin porridge and stir in while hot. Soak half a pound of glue in cold water for an hour, then bring to boiling point by setting the vessel in a pot of boiling water over the fire; stir into the lime mixture together with half a pound of Spanish whiting. Now, pour into this 5 gallons of hot water; stir for three minutes from the bottom; cover to exclude dust and let it alone for two days. Apply hot when you are ready to use it. A pint of the mixture will cover a square yard of the surface. This wash is used in and around army posts and forts, and is very durable, being second only in this respect to paint.



History of the Word Dosimetry

[The word "dosimetry" is used so frequently in these pages that it may be of interest to our readers to learn how it came into use. In America we have adopted more generally the word "alkalometry" to designate the use of the small, frequently repeated, "measured" doses of the alkaloids. The latter word was suggested by Dr. Epstein himself, who translates the article which follows from the *Repetoire Universel de Medicine Dosimetrique*, 1883.—ED.]

It is now twenty years since Prof. Burggraave, then in the service of the Hospital of Ghent, began the experiment with the ideas of Dr. Mandt, which led him at last to that medical reformation with which his name will ever be associated. Prof. Burggraave adopted at first the word "atomistic" as a characterization of this method and of his new medicaments. It was not till observations made later on and after the advice of many physicians, who found the word "atomistic" to have a too-close kinship with homeopathy, that he adopted the word "dosimetry," created all by himself as a name for this reformation.

This word then renders his ideas the best, "whether in respect to the exact and definite doses of the medicaments or also because of their adaptation to the nature and course of the disease," as he takes care to tell us himself. To preserve for our pharmacy the complete ownership of this word, which was then not to be found in any dictionary I thought it best to make a legal registry of this word in the Court of Commerce. The trademarks which I have deposited at that epoch, bear, as a superscription, the words, "*granules dosimetrique du docteur Burggraave*,

preparés par Charles Chanteaud, Pharmacien du premier Classe, à Paris, 54, rue des Francs-Bourgeois, medicaments dosimetriques, etc. [Dosimetric granules of Dr. Burggraave, prepared by Charles Chanteaud Pharmacist of the first class in Paris, No. 54 of Francs-Bourgeois St., dosimetric medicaments, etc.]

Up to this time we have refused to vindicate before the courts the property of a word which had been assured us by legal registry. It seemed to be useless for us to pay more attention to our counterfeiters than does the public itself. But at present, as their number and audacity increases continually, we have decided to prosecute by all legal means all those who in the future will not hesitate to make use of the word "dosimetric" with the object of enhancing the value of their products.

CH. CHANTEAUD, Pharmacist.

ASEPTICIZING (UVIOLIZING) MILK BY ULTRAVIOLET RAYS

Prof. Seifert lately delivered a lecture on the subject of uviol milk, from which the following is an abstract.

The use of heat for sterilizing milk, according to Soxhlet, was to destroy the putrefactive and peptonizing saprophytic bacteria from the cow's dung, but it happened to strike also the most sensitive normal bacteria of the milk and which are just those that protect the milk against the proliferation and decomposing effects of the first-mentioned organisms. From this mistake arose the false ideal of an artificially made "germ-free" milk, and the criterion was the longer or shorter period of non-appearance

of souring. Hence there was no attempt to kill off the pathogenic germs, and much less so when it was noticed that sour milk had a laxative effect, this being taken as a sign of unwholesomeness.

In time, however, it was noticed that heat-sterilization, and especially pasteurizing, did not only not bring about freedom from germs, but rather led to the enriching of the milk with the above-mentioned hurtful bacteria, and that the killing off of any pathogenic bacteria present was not at all made sure. But eventually the value of the sour-milk ferments was realized.

Then it was found that the ultra-violet rays are capable of destroying the incitors of disease in man and in beast while leaving an at least sufficient number of the sour-milk ferments in the fluid. When the milk is made aseptic in this way by means of machinery and filled in sterilized bottles and carefully sealed, it will keep for two and three days because of the bactericidal effect on raw wholesome milk.—*Deut. Med. Wochenschr.*, 1910, p. 343; in *Pharm. Zentralh.*, 1910, p. 196.

HYPER- AND HYPOTHYROIDAL ACTION

Before the Société de Biologie, at its session of May 22, 1909, Levi and Rothschild pointed out certain ophthalmic signs from which can be deduced the existence of either hyper or hypoactivity of the thyroid gland in the body. Some of the principal signs of hyperthyroidism are: exophthalmos, increased luster of the eyes, nystagmus, strong development of the eyebrows, continual winking with the eyelids or discoloration of the same. Signs of diminished activity of the thyroid are: deeply sunken eyes, sparse or absent eyebrows, and edema of the lower lids.—*Wien. Med. Woch.*, 1910, col. 44.

BACTERIOLOGIC EXAMINATION OF THE BLOOD IN SURGICAL INFECTIOUS DISEASES

N. Spassukotzkaja has the following in the *Russki Chirurghitscheski Archiv*, II, 1909: Postmortem examination of the heart-blood usually gives the same results as

examination of the blood of the same patient during life. Thus, appearance of the bacterium *coli* in the blood of the cadaver must be regarded as a postmortem phenomenon.

In acute osteomyelitis bacteremia occurs as a rule even before any local phenomena are apparent. In erysipelas, bacteremia makes its appearance very early and disappears when the erysipelatous redness makes its appearance. When bacteremia shows itself in the course of surgical infectious diseases, with local phenomena, it indicates the severe septic character of the disease.

Infectious diseases provoked by pus-forming microorganisms, without any local manifestation, usually run an especially severe course. Sepsis is not a disease but a complex of symptoms which indicates the severe course the disease is taking, and any and every infectious disease may in its course present this clinical picture. In sepsis provoked by the staphylococcus aureus bacteremia results, as a rule. In staphylococcus sepsis there usually will occur metastases. Streptococcus sepsis runs its course without bacteremia, and metastases usually are absent.—*Wiener Med. Wochenschr.*, 1910, No. 12.

HYOSCYAMUS SEED AMONG POPPY SEEDS

Von Doogen, the controller of the seed station at Budapest, noticed the presence of hyoscyamus seeds among poppy seeds. In consequence of a number of cases of poisoning which were traced back to the ingestion of poppy seeds a large quantity of the same were ordered to be examined. This resulted in the discovery that the poppy seed which came from Russia contained a large percentage of hyoscyamus seed. It is probable that on the Russian poppy fields the hyoscyamus plant grows as a weed and both are harvested and thrashed together, hence the contamination.

The treatise contains a thorough discussion of the occurrence of hyoscyamus seed, the toxicity of the alkaloids it contains and what is to be done in case of poisoning with it. Hyoscyamus contains mainly hyoscyamine and hyoscyne in combination

with malic acid. Hyoscyamine is isomeric chemically with atropine and the aspect of an intoxication with hyoscyamine is the same as one with atropine. As small a quantity as .00025 (1-250 grain) of hyoscyamine is sufficient to cause disturbances in the human body. In the majority of examinations made of Russian poppy seed there were found in 100 Grams (1500 grains) from one to twenty hyoscyamus seeds. In four specimens, however, there were even from 1600 to 3500 hyoscyamus seeds! From this it follows that in using specimens of poppy seed most contaminated with hyoscyamus the toxic disturbances of the latter may occur after the ingestion of from two to five seeds only of the contaminating specimen.

The most popular dishes with poppy seeds in Hungary are: poppy tops (*Mohnkipfel*), poppy bubbles (*Mohnstrudel*), and poppy vermicelli (*Mohnnudeln*). For one kilogram about 2 pounds) of poppy tops there are used 500 Grams (about one pound) of poppy seeds, so that at one meal there are consumed on the average 100 Grams (1500 grains) of poppy seed.

The danger begins according to the author with the use of a contaminated specimen of poppy seed which contains in 100 Grams (1500 grains) from 77 to 137 hyoscyamus seeds. A contamination of such a strength was observed in 19 out of 111 cases. The author found also the seeds of a number of other weeds in the specimen of poppy seeds which he examined.—*Pharmaz. Zentralhalle*, 1911, p. 113.

[In Russia, when a child, the GLEANER has eaten cakes made from poppy seeds, with honey.]

THE TRANSITION OF REMEDIES IN THE MILK

H. B. Koldewyn has recently published the thorough investigations made on the subject in the title. The animals used in this work were cows and goats. After giving a general historic resumé, the investigator reports every remedy he tried separately, preceded by a survey and description of the process pursued. The results are as follows:

Mercury taken as calomel or applied externally as unguentum hydrargyri is not demonstrable in cow's milk. The same is true of antimony, as tartar emetic, and of bismuth as the subnitrate, of zinc as the oxide, and of morphine and aspirin used as such.

Lithium, on the other hand, as lithium carbonate, and quinine and urotropin gave positive reactions. But even when the doses of these were very large the part which passed into the milk was very small. In respect to lithium Koldewyn found the remarkable fact confirmed, that it is a natural constituent of the milk. The author thinks that the quantity is nearly constantly the same, and is about 0.1 milligram pro 100 cubic centimeter. This quantity does not become augmented when lithium is administered.

In the goat the results with sugar of lead and alcohol were positive, but only when the amount given was given at once and in large quantities.

The results with cytisin, phenolphthalein and fluorescein were negative.

The results obtained differ in many respects from those we meet with in literature. And this is not to be wondered at, for it is to be taken, *a priori*, that the age, condition of health, and life conditions of the animals experimented upon, as well as the time and mode of administering the remedies, e. g., many small doses or a few very large ones, given at once, all will have their influence upon the results.

The results obtained by the author are, therefore, specially valuable because the description of his processes of investigation is given by him in exact detail so that they can be duplicated and imitated.

Along with the results on the milk the author mentions also the results of the passage of remedies into the urine.—*Pharmaz. Zentralhalle*, 1911, p. 101.

ALCOHOL COMPRESSES FOR SUPER- FICIAL INFLAMMATION

Moist compresses with 70 to 95 per cent alcohol give excellent results in all inflammatory conditions of the skin and of tissues close to the skin.—See Koehler.



Rabies From Skunk Bite

LAST summer I became a subscriber to CLINICAL MEDICINE through a friend, and in the first number I received I read of a brother who wanted a remedy for snake bite. I thought I was qualified to answer his question after my work in the southwest, i. e., Arizona, and I answered it. It was printed in the October experience number. I closed my article by saying that the above treatment did not include a remedy for the bite of a skunk which we occasionally had and resulting in hydrophobia.

In a later number Dr. C. S. Moody of Idaho criticized me very severely and stated that hydrophobia from the skunk was a myth, a southern negro superstition, and that if I could produce three reputable physicians' statements for one case he would give to charity a sum representing, as I take it from his figures, about one-half of his worldly goods and possessions.

I have collected more than the sufficient evidence and if you care to print what I am listing below with the permission of my colleagues in the west it may set some misguided persons in the smooth track and lift them from the rut that one gets into, so often, from doing reservation work, where about all he sees is sore eyes and smallpox.

I have permission to reprint all of the enclosed pamphlet, written by Dr. Yount. I was present when he read it at our Territorial Medical Society meeting in 1909, and it was approved by the entire society.

I can personally report the following cases which resulted indirectly from skunk bite:

Case 1. I was called to see a miner, A. B., working at the Savoy mine, near Crown King, Arizona, by the manager, M. Cuniff,

and found a man suffering with a badly swollen arm, the results of a bite inflicted by a dog.

The dog, about two weeks before, had a combat with a skunk and was bitten by the skunk, which he killed. The dog had become very restless and his actions and manners were at times curious. From being very friendly to any one he become surly, and on this miner approaching him he sprang at his throat and was warded off by the arm, which was lacerated before the dog was beaten off. Home remedies were applied at the nearest house consisting of swabbing the wound out with pure carbolic acid, then applying turpentine and the laceration was then filled with bichloride of mercury and a well masticated chew of tobacco placed over it. As a finishing touch this was bound up and the dressing had been there for three days when I first saw it. My only treatment was to apply local applications. The arm presented a horrible appearance from the caustics.

He was immediately sent to the Pasteur Institute at Chicago and at last reports, several months after his return, he was doing nicely.

Case 2. Patient, D. E., a girl, age eight, Mexican, was lacerated on body and limbs by the dog just described. The dog belonged to this Mexican family. After treating the patient of the other case I started to see if any others had come in contact with this dog and this case was reported. I called at the school house where this patient was attending school and after inspection of her wounds advised the family to send her to Chicago for treatment and on notifying the

county supervisors they took charge of the case and I think this case was sent to the Pasteur Institute in care of her mother.

I was unable to obtain any of the nervous tissues of this dog as the body was burned after being killed, three days previous to my knowledge of the affair.

I will add the following incident that came under my observation, it being a case of hydrophobia in a wild-cat.

Roy Spense, of Palace Station, a road house on a stage line out of Prescott, Arizona, was aroused one night by a disturbance at the door and on looking out the window he saw a large wild-cat leaping and clawing at the door. On attempting to drive it away it attacked him and he was compelled to retreat to the house. After several ineffectual attempts to gain admittance to the house it left and proceeded to the corral and here another disturbance took place.

In the morning Spense proceeded to the corral where his horse was tied and he found a dead cat and a badly lacerated horse, the horse having killed the cat during the fight by kicking and striking it. The attitude of the cat during the preceding night was so entirely different from the usual sneaking manner of a cat that rabies was feared and the spinal marrow and a portion of brain was removed and sent to a Pasteur Institute for pathological examination.

A positive diagnosis was returned and instructions given to watch the horse. This being done it was soon noticed to be "off its feed" and acting queerly and was killed and body covered with brush and logs and coal oil and burned.

I believe this happened in the spring of 1909.

P. G. CAPPS.

Cisco, Ill.

The following correspondence, sent us by Dr. Capps, explains itself. The writer of the first letter, Dr. Flinn, is superintendent and medical director of "Pamsetgaaf," a sanitarium well and favorably known to all residents of Prescott.

PRESCOTT, ARIZONA, February 15, 1911.

DEAR DOCTOR CAPPS: In reply to yours of February 7th, Dr. Yount is mailing you a reprint of an article by him on "Rabies," which covers fully the question of hydrophobia from skunk bite.

The only case which I saw personally was that of the hunter, Scanlin, who died at the County Hospital about two years ago, and which case is reported in Yount's paper. It was undoubtedly hydrophobia from the bite of a skunk. With kind regards, I am

Yours very sincerely,
JOHN W. FLINN.

The writer of the following letter, Dr. McNally, is chief surgeon of the Santa Fé and P. R. R., also surgeon to St. Mary's hospital at Prescott.

PRESCOTT, ARIZONA, February 10, 1911.

DEAR DOCTOR CAPPS: Your letter of recent date to hand, and contents carefully noted.

Doctor Yount will be able to give you exact data on one case, at least, of hydrophobia following the bite of a skunk.

The doctor attended a man by the name of Scanlin, a trapper, who was bitten about two years ago out from Hillside, Arizona. He came to Prescott at once, and the county offered to send him to the Pasteur Institute at Chicago. He consented at first, but later refused to go. He returned to Hillside, and about six weeks later developed pronounced symptoms of hydrophobia. He was taken to the county hospital, here at Prescott, and Dr. Yount attended him. The doctor invited nearly all the physicians of Prescott to see the case. It happened to be one of the number and remained nearly an hour studying and observing the patient and his symptoms.

I shall never forget that patient. As the disease progressed the spasms became more numerous, and more pitiable to behold; the weird cries and contortions of the patient, arose, progressed, and died away simultaneously with the "aura" of agony, which seemed to arise in the periphery of the entire nervous system, terminating in the pharyngeal and laryngeal centers. Morphine or hyoscine, even in massive and oft repeated doses, hypodermically, did not seem to influence the spasms very perceptibly, but they did do one thing, and in view of our present knowledge or ability to cope with the disease it was a good thing to all concerned—they seemed to hasten the end.

I left my wife in the buggy outside the hospital enclosure, over three hundred feet away from the room where the patient was restrained, and as you know she is not at all of a nervous temperament, but, when I returned to her she was bordering on collapse from fear and excitement, occasioned by the horrible cries, and terrible screams of pain and agony which reached her ears.

I am sure that Dr. Yount has exact and minute data on this case, and will give you the facts. With kindest regards to yourself and Mrs. Capps from Mrs. McNally and myself, I am,

Sincerely yours,
J. B. McNALLY.

PRESCOTT, ARIZONA, Feb. 14, 1911.

DEAR DOCTOR CAPPS: I am sending you under separate cover a reprint of my report on "Rabies—With Report of Cases from Skunk Bites." This is practically accepted as authority here, as no one has ever refuted any statement I have made in it. The experimental work is very meager, but it is positive.

If I can be of further service let me know. Hope "you win."

Yours fraternally,
C. E. YOUNT.

We regret that we have not the space to publish Dr. Yount's paper in its entirety. We suggest that anyone especially interested, in the subject consult the original, which appeared in *The Southern California Practitioner*, March, 1910. It is probable that Dr. Yount can furnish reprints. Following is the portion of the paper of particular interest in the present discussion:

Let us now consider rabies in relation to Arizona. Since the classic paper of John G. Janeway, assistant surgeon, U. S. A., published in the *New York Medical Record* of March, 1875, in which he reported ten fatal cases of rabies from skunk bite, on the then Kansas frontier (Fort Hayes), the skunk has been a well recognized cause of distribution of rabies, and after you have studied the table here-with appended, showing the number of cases of skunk bite and of rabies collected in Arizona, occurring between May, 1907, and May, 1909, you will have to admit that for Arizona, at least, the skunk is the most prolific source of infection; in fact, almost the only cause of rabies, quite reversing the order of frequency given by the several authorities previously cited in this article, for other parts of the United States.

That rabies in the skunk seems peculiarly endemic in Arizona (at least during the two years mentioned) may be surmised by a comparison of what data we could collect from California, our neighbor on the west, and New Mexico, our eastern neighbor. Dr. L. M. Powers, Health Officer of Los Angeles, informs me that "There is no Pasteur Institute in this city and I do not know of one this side of Chicago. From all the sources of information I have not been able to learn of any case of human rabies ever having occurred in this city and do not think any person has ever been sent from here to any institution for the treatment of rabies. Some eight years ago there were several cases in dogs."

From the records of the Chicago Pasteur Institute for the past eighteen years, New Mexico has sent them only 4 cases for treatment as against 33 sent from Arizona. The Pasteur Institute at Austin, Texas, from August, 1904, to August, 1908, received 5 cases from New Mexico and 4 from Arizona.

Report of cases of rabies following skunk bite.

Case 1.—R. M., female, age seven years, living near Prescott, was bitten during the night, May 10th, 1907, while sleeping in a tent, by a skunk, upon hand and face. Wounds were cauterized the next day and arrangements were made to send the patient to the Chicago Pasteur Institute, receiving treatment there about the seventh day after the bite. After receiving the course of treatment at Chicago, she returned to Prescott. She was told to keep quiet and out of the sun; this she failed to do. On June 28th, or 41 days after the bite, she developed symptoms of rabies, death occurring on June 30th. No autopsy was held.

Case 2.—J. W. S., trapper by occupation, age 60 years, living about 65 miles from Prescott, was bitten above the left eye while asleep in the open, August 28th, 1908, by a young skunk of one of the large varieties. The skunk was killed by patient

by choking, as he tore it from its furious grip on his flesh. The next day patient came to Prescott, where his wound was cauterized. The skunk was not examined bacteriologically. For some unknown reason patient returned to his traps, though it was his purpose to go at once to the Chicago Pasteur Institute. Forty-one days after the bite the first symptoms of rabies were noted (difficulty in swallowing and pain and redness in the wound) when he set out again for Prescott and medical attention. His case presented the classic symptoms of furious rabies, suffering indescribable agonies until relieved by powerful narcotics, and on the evening of the forty-fourth day by death. The medulla was removed and placed in a mixture of equal parts of neutral glycerine and water and sent to the Public Health Laboratory at Washington, D. C., for examination. The report of the director of the laboratory, Major J. M. Rosenau, is as follows:

"I have to say that the bulb of a human case of rabies arrived here safely but was so much disintegrated that nothing definite could be made out on microscopic examination.

"On October 21, two rabbits and two guinea pigs were inoculated subdurally with this material. One of the guinea pigs died November 8 and the other November 11 with characteristic symptoms of rabies. Negri bodies were found but they were very small. One rabbit died November 14 and the other November 20, with symptoms of rabies. Negri bodies were found in both rabbits.

"I am sending two slides from the rabbit that died last as the hodies are larger and more numerous than in the case of the other animals."

We present the following conclusions:

1. We do not wish to overestimate the importance of the skunk as a source of rabies by the tabulation of cases above presented, but inasmuch as only one other case of infection was reported during the time our data were being collected there is but one rational conclusion (if we are permitted a conclusion from such a small number of cases and covering only two years)—namely, that the skunk is the most prolific endemic source of the propagation of rabies in Arizona. (There was one case of rabid coyote bite during this period and one of a rabid dog, since this period. The dog was bitten by a skunk.)

2. We believe that epidemic rabies would have a greater number of victims and would spread more rapidly here, as elsewhere, if distributed by the most common carriers, the dog and cat.

3. In the absence of experimental proof, we believe that there is no such thing as a "hydrophobia skunk," per se; that all skunks are, like a few other animals, very susceptible to rabies; that no particular species is more susceptible than another.

4. When a skunk, an animal nocturnal in habits, generally timid, attacks man or any other animal, and inflicts a bite, if the skunk is not killed and its bulb examined bacteriologically, it were better to accept this sudden change of disposition on the part of the skunk as *a priori* evidence of rabies and seek Pasteur treatment at once.

[While we are discussing rabies I want to call attention to the fine article upon this disease in the 1909 report of The Bureau of Animal Industry, by Dr. John R. Mohler, Chief of the Pathological Division.

Reporter	Residence	Cases bitten by skunks in Ari- zona from May '07 to May '09	Cases bitten by skunks developing rabies May '07-'09	Treatment	Result	
					Died	Cured
B. G. Fox	Health Officer Gilt County	1	0	1 Chicago, Pasteur Institute	.....	1
A. P. John	Health Officer Yuma County	0	0	.....	.....	.....
Roundsville	Health Officer Coconino County	1	0	1 Chicago, Pasteur Institute	.....	1
Milligan	Coconino County	2	0	2 Chicago, Pasteur Institute	.....	2
Kingsley	Nogales	1	0	1 Austin, Texas, Pas- teur Institute	.....	1
Witmore	Tucson	0 in 17 yrs.	0	0	.....	.....
Lacey	Solomonville	0 in 25 yrs.	0	0	.....	.....
Drane	Roosevelt	1	0	1 Permanganate injection	.....	1
Palmer	Kingman	0	0	0	.....	.....
Whiteside	Superior Public Health	0	0	0	.....	.....
Godfrey	Phoenix	0	0	0	.....	.....
Brockway	Florence	0 in 15 yrs	0	0	.....	.....
Clymer	Yuma	0 in 6 yrs.	0	0	.....	.....
Fale	Clifton	0	0	0	.....	.....
Brown	Kelvin	0 in 4 yrs.	0	0	.....	.....
Minnetta	Jerome	0	0	0	.....	.....
Maisch	Globe	4	1	3 to Pasteur Institute	.....	3
Powell	Wilcox	2	2	1 Not Treated	1 Died	.....
Yount	Yavapai	6	2	2 No Pasteur treatment	2 Died	.....
				1 No Pasteur treatment	1 Died	.....
				5 Pasteur treatment	1 Died*	4
		Total 18 cases bitten by skunks	Total 5 cases bitten de- velop rabies.	18	5 Died	13 Cured

*7-year-old child bitten on hand and face, getting to Chicago Pasteur Institute about seventh day after bite.

According to Dr. Mohler this disease is more common than most of [us] imagine, and it is increasing. Many hundreds of human cases are treated every year in the different Pasteur Institutes, which are located at Washington (Hygienic Laboratory), Atlanta, Ga., Austin, Tex., Baltimore, Md., Chicago, Ill., Iowa City, Ia., Jacksonville, Fla., Minneapolis, Minn., Montgomery, Ala., Newark, Del., New Orleans, La., Pittsburg, Pa., Raleigh, N. C., Richmond, Va., St. Louis, Mo., two in Indianapolis, Ind., two in New York City. There are records of 82 deaths in 1908, from the registration area, covering half the population.

Among animals there were 1167 positive findings in 1908, and these were probably but a fraction of the cases, the vast majority being unreported. Thus, in Wisconsin the state veterinarian estimated that 584 animals died of the disease during the year (1908). It probably occurs in every state, definite reports coming from all except Idaho, Utah, Nevada and Oregon. Texas is said to have more cases than any other state in the Union.

In 1903 Negri found certain protozoan-like bodies in the ganglionic cells of rabid animals. These are called "Negri bodies" and are claimed by the discoverer to be the specific cause of the disease, an opinion which is concurred in by Mohler. They are

found in more than 96 percent of the cases, and are now universally considered diagnostic of the disease. They are from 0.5 to 25 microns in size, oval or pear-shaped and strongly eosinophilic.—Ed.]

WE ENTERTAIN THE GRADUATING CLASSES OF THE MEDICAL COLLEGES

For several years it has been our custom to invite the graduating classes of different Chicago medical and veterinary colleges to become our guests for an afternoon and an evening. At first we entertained only a few, of the senior classes (and they didn't turn out very well), but during the last two years we have endeavored (with good success) to persuade every senior student of every college in this city to come out to Ravenswood in a bunch and see us, and we have tried as hard as we know how to give every man and woman who did come "the time of his (or her) life". This year we had with us students of the Chicago College of Medicine and Surgery, Bennett, Reliance, Jenner, Hahnemann, Hering, the College of Physicians and Surgeons, College of Medicine and Surgery, Northwestern, and Rush.

Probably five hundred students have "broken bread" (and other things) with us

since the first of January. We should like to describe every one of these visits in detail. Each has had its peculiarly interesting features, but we haven't the space, even if we had the memory for all the items of interest. The following description applies particularly to the visits of the last two classes which came to our plant, that is, of the seniors of the Northwestern University Medical School and the upper classes of Rush Medical College.

The boys were escorted out to our plant in a body, a representative from our house being sent to the college to act as guide. When they arrived, in the early afternoon,

they were taken to the top floor of the publishing building, where their hats and coats were checked. Then Dr. Abbott presented "the key to the plant," as shown in the accompanying illustration. Next came a "personally conducted" trip through the printing establishment, the students being divided into small groups of from eight to twelve each, each group being placed in charge of some member of our executive staff, who acted as guide.

In the printing plant all stages in the production of magazines were shown: the setting of the type on monotype machines, which not only make every individual type, but set it up at a single operation. They saw how the forms are made up, electrotyped and printed, the great machines which take up the different segments of the printed magazine or book and wire them together, as well as the processes of trimming,

binding and mailing—in fact, everything which goes to the production of a high-class journal.

In this plant of ours, not only is *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* printed, but also such well-known magazines as *System*, *Factory*, *Popular Electricity* and *Dressmaking-at-Home*.

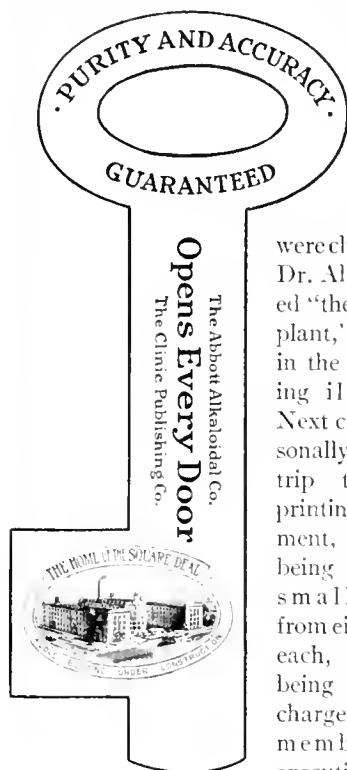
Next comes the power plant, located in the central building. Here are seen the great self-stoking boilers which produce the heat as well as the power and light for our enterprises; also the most modern engines, dynamo and electrical equipment, our entire plant being operated as well as lit by electricity.

Most time, however, is spent in the laboratory building, which the young men inspected from top to bottom. Every stage of the manufacture of drugs was shown. For instance, they were shown just how arbutin is extracted from uva ursi, every stage of the process being in course of operation at the time, including the grinding of the leaves, the extraction of the drug by percolation, the removal of the tannic acid, the concentration of the fluid, the separation of the crystals of arbutin by centrifugal machinery, and the final processes of recrystallization and purification.

Seeing this they could understand why samples of uva ursi varying several hundred percent in strength, carrying 15 percent of digestion-disturbing tannin, could not possibly equal or even imitate arbutin in therapeutic efficiency.

The boys were greatly interested in these processes, and in learning how such drugs as digitalin, emetine, colchicine, salicylic acid, nuclein, lecithin, the sulphocarbolates and other drugs are produced. Of especial interest to them on this floor were the analytic, physiologic and biologic laboratories, in which were illustrated briefly the methods of testing drugs, elaborating manufacturing methods, as well as the making of bacterial products, and the examination of pathologic specimens of all kinds.

On the floor below they were shown how these drugs are made into finished forms, that is, into tablets, hypodermic tablets, triturations, granules and pills, and at this point there was a short rest and a talk was





Students of Northwestern University Medical School

given by Mr. M. M. Burdick, of the manufacturing staff, upon the relative certainties and uncertainties of the active-principle remedies and the galenics, as illustrated by specimens of drugs, crude and manufactured.

On the floor below this they inspected the editorial and business offices of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*, visited our rapidly growing library, which is indexed for convenience of consultation not only on the part of the editorial staff of our journal, but by the physicians in this portion of Chicago or from out of town, and saw the offices of Dr. Abbott and his immediate "family" of helpers.

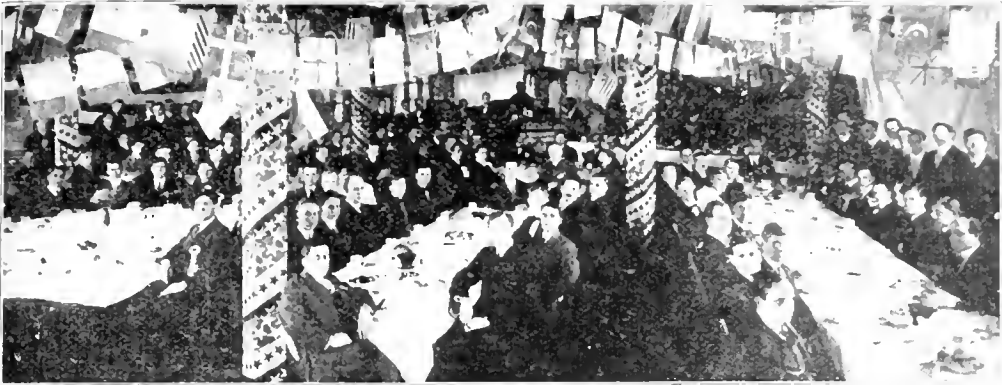
On the first floor methods of receiving, handling and filling orders, the adjustment of accounts, and the general financial administration of a great enterprise of this character, were shown in detail.

But while practically every one of these Rush and Northwestern boys expressed himself as intensely interested in these things, the production of literature, the publishing of magazines, and the manufacture of drugs, the real event was the dinner, served on the top floor of the publishing building, where a special room has been assigned and prepared for events of this kind. What healthy medical student is not interested in a "feed"? This room was decorated with flags and flowers, and when the boys put in an appearance, promptly at six o'clock, everything was ready for a generous meal, and for a royal good time. The dinner was prepared and served by our own employees. It was a good dinner, if we can believe what the boys tell

us. We know that they approve of the volunteer "waitresses," the girls who write our letters, fill the orders of the doctors which come in by mail, enter up the subscriptions for *CLINICAL MEDICINE* and otherwise serve the interests of the entire "family."

After the dinner the fun began. We had music, presided over by "Hogan the Inimitable." Hogan, you must know, is the superintendent of the Ravenswood Branch of the Chicago Postoffice—and there is only one Hogan. He is an Irishman, and that explains the overflow of wit, the stories that he can tell, and the songs he sings, especially, "Patrick J. O'Hare," and "Has Anybody Here Seen Dodson?" The boys also approve of Hogan.

We have a little song-book which is used on these occasions, modified from time to time to meet the special necessities of every class. This song-book contains such classics as "E-Yip-I-Addy-I-Ay," "Has Anybody Here Seen Kelly" and "In the Good Old Summer Time." Everybody sings, and selections from the song-book are liberally interspersed throughout the entire program. Then we have some musical volunteers, some from the home bunch, some from the classes themselves. Last time our proof-reader, Mrs. Tate, and her son Wallace, delighted the crowd, and during the last two occasions we have been favored with a male quartette from one of the local churches. On one occasion the boys brought along a pianist, on another, a violinist, and that violinist was so good that we have employed him ever since to help entertain the succeed-



Students of Rush Medical College

ing bunches. This youngster is using his gift of music to help pay his way through college.

Then we have a stereopticon "show," and Dr. Abbott, who is toastmaster, uses the screen liberally to give point to his stories and to his beautiful little talk on "Practice Building."

Doctor Abbott is a great toastmaster. He always has a ready word for every occasion, and the toasts which he proposes are uproariously received, especially that famous one to the girls:

"Here's to the girls; not too young, for the good die young, and who wants a dead one?"

"Here's to the girls; not too old, for the old dye young, and who wants a dyed one?"

Some of the older readers of *CLINICAL MEDICINE* will remember the pictures drawn by Dr. Torgny Anderson, and published several years ago, showing the old-time doctor and the new. The first one showed the "old timer" with his saddle bags loaded with galenic medicines, leading a burro behind, also loaded with the remedies of the old school; doctor tired, horse tired, burro tired too. The second picture showed the "alkaloidal" doctor, the man of the new school, with a case of the alkaloids sticking out of his pocket, galloping home over the western prairies, after a visit—everybody happy, horse not least so.

These pictures were thrown on the screen, also others showing how difficult it is to force the nauseous teaspoonful or tablespoonful dose of the galenic mixture down the throat of the unwilling child, and how easy it is to give the granules, and why

therefore the kiddies all love the active-principle man.

As a part of the talk Dr. Abbott told the story of the origin of this great business, and why and how the *CLINIC* came into being, beginning back in the days when he was a boy on the farm in Vermont, telling how he worked his way through school, again through the Medical Department of the University of Michigan. Then followed pictures of his first employee, of the first building, and groups of workers, growing larger and larger every year, finally culminating in the beautiful buildings which we now occupy and which the visitors had just seen.

This story was made personal by some reference to the qualities which have made for success in this enterprise, qualities which are just as essential to the building up of practice in the country town as they are for the creation of a pharmaceutical manufacturing plant.

That our interest in students bears fruit is shown by the many letters we get from them after they get out into the field. Here is one from Dr. B. A. Muster, a Kentucky brother:

"I bought my first bill of goods, three years and a half ago, on credit. At that time I was just out of college and in debt for part of my college expenses. I came here a stranger and opened up my office in an old meat shop, where I slept. Today I am out of debt, own a nice house and lot and keep two horses, as I have a large practice. Thanks to the alkaloids. Every medical society I attend I have something to say about you people."

This young man has learned what is meant by practice building.

But the speaking is not all one-sided. Members of each class enliven the occasion by impromptu speeches. When the Northwestern boys were here, representatives were called upon from the different states and from the foreign countries, and some beautiful little speeches were made. The same was true of the Rush class. While the faculties of the schools have not generally been very well represented, usually there are one or more of these men present and these too add to our pleasure and instruction.

Of course the students have always shown much interest in the addresses made by different members of *our* "faculty", recounting the reason for and the rise of the great active-principle movement. Various men have spoken at different times, but typical talks were those given the Rush boys. The speakers were Dr. W. T. Thackeray, who has had a long and unique career as a medical army officer, covering life in the Civil War, and on the great plains, as a medical member of the staff of Don Carlos, in the first Carlist rebellion in Spain, as a practitioner in the field, as a salesman of drugs and as a manufacturer and sales manager. He spoke upon "The Old Therapy and the Birth of the New." Dr. W. F. Waugh, Dean of Bennett Medical College, a man whom you all know, told us why active-principle therapy should replace galenic therapy. Dr. George H. Candler, also well-known to every reader of *CLINICAL*

MEDICINE, gave an interesting talk upon the new medicine, and what it means to the new doctor; while Dr. J. Favil Biehn, our laboratory specialist, discussed the laboratory and its importance to the young physician.

Earlier in the evening souvenirs of the occasion were distributed among those present, including copies of the Digest of Positive Therapeutics, and a filled 9-vial case. These cases were used as a text for a portion of Dr. Candler's remarks.

Of course, the boys smoked. What would a dinner for medical students be without the "grateful herb?" Cigars were passed around after the dinner was comfortably digested and everybody was kept liberally supplied. Early in the evening everybody sang "Illinois," and pictures illustrative of this great State-song of ours were thrown upon the screen. There were the usual class-yells and that fine display of high-spirits which makes young manhood what it is. Finally the evening was concluded about 10:30, by the singing of "America."

Next year we hope to meet a new batch of medical students. They are hereby invited—now; also, every medical student, from every other medical college in America, Canada or the world.

Come and see us, all of you.

A CASE OF HEROIN POISONING

One evening, about 4 o'clock p. m., I was called to see a 20-month-old boy of usual



Senior Students of Bennett and Reliance Medical Colleges



Students of Hahnemann, Hering and College of Medicine and Surgery

good health. Found râles in the tubes, fever of 101.5° F., restlessness, and some cough. Bowels had not moved for twelve hours, and, with a furred tongue presented, I concluded to commence with six tablets of calomel and soda, each 1-10 grain, hourly. I prescribed the defervescent compound in suitable doses, and ordered a counterirritant over the chest. I returned to my office, but at about 8 o'clock the father called and said he wanted me to go and see the boy at once, as he "did not like the way he was acting."

I hurried over again and to my surprise found the child cyanotic, limp as a rag, blue, and breathing occasionally. It is needless to say that I got busy at once. There were two of the six calomel and soda tablets left, the child having taken four of them. I noticed they were off-color, and when no one was looking put one in my mouth. It was bitter. I opened my case and saw at once what I had done. I had gotten hold of a vial of 1-10-grain heroin tablets. My calomel and soda vial was purposely not labeled, but the vials had been shifted. The tablets in the vials had a very similar appearance both in size and color.

Four tablets of heroin of 1-10 grain to a 20-month-old baby in four hours was what I was up against. How would you have liked to have been in my boots? There were times during the next three hours that that child did "actually and only" breathe occasionally.

Some strong coffee was hastily made and given, strychnine injected, the bowels were thoroughly washed (child being too weak and

limp for an emetic), hot baths used, and artificial respiration resorted to when breathing ceased at times and all seemed to be over.

A constant fight was thus kept up for over three hours, when slight improvement in breathing was noticed, and faint traces of color began to appear on the lips. A little later, when the child had sufficient strength, it began to yawn, and a hand found its way to the nose, which it attempted to wipe off its countenance, so vigorously did it rub. That yawning and rubbing looked mighty good to yours truly about that time, to say nothing of the dry-eyed mother of that child. Presently it opened its eyes and called for mamma, in a bewildered manner, and a 20-month-old baby had recovered from taking four 1-10-grain heroin tablets in four hours.

It was my turn to become limp, after relaxing my nerves from a three-hour strain. And as I walked home, I realized as never before, the responsibility assumed by us all, when we are called to administer to the sick, and how, without constant vigilance, the shifting of a vial in our case may cause a death.

This good family never knew that the child's desperate condition was due to carelessness of the doctor they had called to administer relief, and so far I have not felt called upon to inform them. They were satisfied that the child made a good recovery, the incipient pneumonia being "busted wide open."

Now I always look.

S. M. M.

—, Oregon.

[We learn a lot by our mistakes. Doctors make them, and druggists, and they do not always result as favorably as this one did. Heroin poisoning is unusual and this case, therefore, deserves close study. If other members of the "family" have had similar experiences I hope they will report as promptly and as frankly as this brother.—Ed.]

APOMORPHINE IN STRYCHNINE POISONING

One of my lady patients whom I had treated for the last seven years for different ailments, lately complained of feeling weak, so I gave her thirty tablets of strychnine arsenate, of 1-30 grain each, telling her to take 4 a day, but to keep them out of the reach of her children as they were very poisonous. Three or four days afterward her husband asked me over the telephone what kind of pills I had given his wife, saying she had taken the whole "shooting match." I told him. Then I directed him to give her the home emetics, one of which is a raw egg beaten in a cup of lukewarm water. (If you never tried this before, just do so on yourself, and find out what it will do!) He told me she took the pills probably ten minutes before and that she would not take an emetic, as she wanted to die. About five minutes later he telephoned again, saying she had vomited and he thought she would be all right. I then prepared to finish my supper. Ten minutes after that he called me up and said, "Better come over, she is about all in." I got there in my machine in about five minutes.

The woman presented a perfect picture of strychnine poisoning. As my coat rubbed against her bare leg she went into a convulsion which lasted about three minutes, followed by several after that, one every half minute: some threw her out of bed. She had the risus sardonicus, opisthotonos, eyes wide open and staring, and during one of the severest attacks she moaned, "I am going."

I gave her a hypodermic of 1-8 grain apomorphine and 1-2 grain morphine. When after five minutes there was no nausea, I gave another 1-8 grain apomorphine. This I kept up, a dose every five minutes for half an hour, when at last she vomited and

perspiration broke out. Then the spasms became less severe. I now gave pilocarpine 1-2 grain; morphine, 1-2 grain; and apomorphine 1-8 grain. I then left. In half an hour I returned and found her better, but still the jaw was set and the head thrown back. Pulse was very much slower and of better volume. For luck, I gave her another dose of apomorphine, 1-8 grain, and pilocarpine 1-2 grain. An hour afterward her husband informed me that she was better. This was 9 o'clock in the evening. On calling next morning, I found her in bed, but safe, only very sore and stiff and vomiting everything she swallowed. Four days later she was at my office, feeling good, but complained of much muscular soreness all over; she still was sick at the stomach but not vomiting.

I wish to add that no book I ever read mentions apomorphine as an antidote for strychnine, but I heard of it from Dr. J. P. Percival at Prague, Nebraska, ten years ago, who treated a farmer the same way for poisoning. Thanks to him.

F. J. KALAL.

Omaha, Neb.

A CASE OF INFANTILE PARALYSIS SUCCESSFULLY TREATED

In the acute stage, the child, a boy sixteen months old, was taken with fever. I was called and found a temperature of 102° F., one leg paralyzed and arm on same side partially so.

I treated the child on general principles, combated fever, cleaned out with calomel and oil. Gave sulphocarbolates in large doses. Massage along spinal column, first bathing with oil of turpentine the whole length of spine and drying it with a flat-iron nearly hot enough to blister (care must be taken not to blister); repeated this twice daily. I kept up the antiseptic and saline every morning. In two weeks the fever had left.

Then I put the child on calcium lactophosphate, 20 grains daily. Nuclein in 4-drop doses every four hours, blue mass every third night, and compound syrup of hypophosphites (Fellow's), 7-drop doses every six hours, gradually increased to 12 drops.

After six months' treatment the child is in good health; can use the limbs and is beginning to walk a little without support, although the leg is weak yet and a little smaller than the other.

G. W. Woods.

Broadlus, Tex.

DRUG IDIOSYNCRACY VERSUS ACTIVE PRINCIPLES

When attending lectures, the writer was taught that drugs, however administered, usually occasion certain happenings in the human system, and these happenings were termed the physiologic action of the drugs. Also that certain individuals show a peculiar susceptibility to certain drugs, or, on the other hand, exhibit no reaction at all; and this was called idiosyncrasy. It was very discouraging—no other therapeutic fact or fiction more so.

In any other line of endeavor the same cause under the same conditions will produce the same effect invariably, but in medicine, it seems, there is a peculiar inexplicable element, described as idiosyncrasy, which hampers, perverts, increases or utterly prevents the action of drugs on the human economy, in certain cases.

It was thirty years ago when I was ruefully forced to accept idiosyncrasy as an explanation as to why drugs would not always do what they were expected to do. This was convenient but not at all satisfying, and after due reflection and reasonable experience, it would seem a more reasonable explanation for the peculiar actions of drugs might be found if carefully looked for.

I will remark here that, while not denying that idiosyncrasy may exist, I have never seen a manifestation of it when using alkaloids or pure active principles in general.

In the winter of 1875-6 I was employed in a drugstore learning the business. When making tinctures, the proprietor would weigh out the drugs and prepare the menstruum, then tell me to moisten the drug with the liquid in a mortar and "pack firmly in a conical percolator." This was done, and being young and strong, when I packed the percolator, it was packed. Then the lower opening in the percolator was closed and

enough menstruum poured over the drug to cover it. Then (usually) a plate of glass was placed over the top to keep out cockroaches, flies, or mice perhaps, or possibly to prevent evaporation. After twenty-four hours the tincture was allowed to run through, and more menstruum poured on, "enough to make two pints."

I say the menstruum was allowed to run through; and sometimes it did run through, but, also, sometimes it did not. If I felt particularly strong while doing the packing, the menstruum did not penetrate the drug in a week. Under such distressing circumstances, the druggist would then take a wire and punch holes down through the mass, whereupon the "percolate" would come through very nicely—and some very fine tinctures we used to make together those times.

My boss told me that tinctures thus prepared were always the same in strength. I thought then he was mistaken—and am now sure of it—but as he was a man to take no back-talk from a "cub," we had no arguments about it. I don't know whether or not sick people who took those tinctures developed "idiosyncrasies." I am reasonably certain, however none of them were alarmingly affected by the alkaloids they contained. However, had your Dr. Smith become disgusted because drop-doses of our tincture of aconite proved ineffective and had given, say, fifteen or twenty drops, something might have happened; it would not, however, have been proof of an idiosyncrasy, only simply proof that he gave a powerful drug with absolutely no knowledge of its effective strength, or in other words, its alkaloidal content.

In an old medicine-case I have a 4-dram vial containing a dram of tincture of aconite. The bottle was filled about twenty-five years ago. Only a few doses of it were ever used, that remaining being the residue after years of evaporation. Should I have the temerity to give some of this tincture to a sick individual, nothing that happened would surprise me. Neither would it surprise me if nothing at all happened. In any case, I should not ascribe to idiosyncrasy what manifestly was due to a defect in the medicine.

No doubt some who read this will say such methods were very crude. They surely were, and they surely are. I do not believe druggists, as a rule, depart widely from formulas given in the Pharmacopeia for the preparation of a tincture by percolation; but no matter how carefully they follow directions, the fact remains that they have no certainty that the product is of any definite medicinal value whatever. Fluid extracts diluted with the appropriate menstruum are supposed to make tinctures of definite, unvarying strength—and perhaps they do. It is by no means uncommon, however, to find in even the best drugstore, pound-bottles of fluid extracts with an inch or more of sediment at the bottom. If the druggist is not sure of the strength of his liquid preparations, what chance has the doctor to know anything about them? Then, how illogical it is to fall back on idiosyncrasy as an explanation for every occasional erratic action.

When the most painstaking effort on the part of the most conscientious druggist (a pharmaceutical graduate, if you please) produces results so contradictory, what may be expected when the notorious sophistication of crude drugs is considered. I myself have found in ten pounds of ground slippery-elm bark enough pieces of hemp cord to make a rope long enough to hang the unregenerate rascal who fed it to the grinding machine. As a poultice, ground hemp may do very well, but as a demulcent it quite probably is inert.

The November number of this journal published Bulletin No. 8 of the State Board of Health of Kansas, showing an investigation into the quality of 57 samples of tincture of aconite procured in the open market in that state. Not a single sample conformed to Squibb's standard, the variance in efficiency being from 50 percent to below 5 percent.

I am aware that what are called standardized tinctures may be bought from manufacturers. I never heard of a druggist buying one, though, unless perhaps it was Warburg's or tincture of nux vomica. Truth to tell, if a wholesaler should receive an order from one of his customers for an ordinary tincture, his opinion of that customer's

ability to conduct a successful drug business would depreciate very much; and very justly so, because the druggist is supposed to make his own tinctures, and usually does so to the very best of his ability allowing for the very frequent poor material at his command.

It would seem, then, that excessive, perverted or peculiar symptoms occurring after the administration of tinctures may not be due to idiosyncrasy at all, but to the defective nature of the crude drug utilized.

And so we might go through the entire list of pharmaceutical preparations and eliminate "idiosyncrasy" as the probable cause of the unusual action of drugs; and it is significant that the closer we confine ourselves to the use of active principles, or at least to preparations lending themselves the least readily to the admixtures of adventitious substance, the less frequently do we note undesirable action.

Pills must be as small as possible; they, therefore, seldom contain anything likely to occasion symptoms other than those desired. Tablet-triturations are particularly good preparations, easily soluble, and contain nothing objectionable. Hypodermic tablets and granules of alkaloids and other active principles are ideal, the acme of the manufacturing chemist's art.

Did anyone ever give an alkaloid or a glucoside hypodermically without producing at least some effect, unless the patient was moribund. I don't recall ever having done so, nor do I recall any peculiarity of action after such medication which could be termed idiosyncrasy.

Recently a young Hungarian made a wager that he could drink a quart of whisky at one sitting. Being like the ameba, "eminently receptive and assimilative," he accomplished the feat. It was "Just Wilson, that's all," and it was a plenty. In about half an hour, when I saw him, he was unconscious, pale, with very labored breathing, and nearly pulseless. Anxious friends had placed a ten-pound cake of ice over his stomach, which may have caused his difficulty in breathing; still, I believe it was the Wilson. He was given hypodermically 1-15 grain apomorphine and a like quantity of strychnine (medicines directly

opposed to each other, but urgently needed.) The classic effects speedily developed, and through the night he passed up a variety of substances from his stomach, yet nothing in the nature of an idiosyncrasy made its appearance. And never has apomorphine failed me when quick emesis was desirable, whether in strychnine, ptomaine or other poisoning, or when quick relaxation was imperative.

And so with all other active principles, so far as I have observed; if they are absorbed or introduced directly into the circulation, the effect is prompt and always the same under the same conditions of the system. The absorbing surfaces are histologically the same in everyone, as are also the cells on which medicines act after absorption; it would seem, therefore, that definite chemical substances coming in contact with these cells under the same conditions should produce the same result always. It is an unfortunate fact, however that ideal conditions for the manifestation of physiological symptoms seldom obtain when we are called upon to give remedies.

The patient is sick, medicines introduced into the stomach may come in contact with an inflamed membrane from which absorption is slow or perhaps well-nigh impossible. Enormous quantities of powerful drugs may be taken under such circumstances and produce no effect; but the reason is obvious and idiosyncrasy plays no part in the matter whatever.

Or the cells may be loaded with the products of body-waste through lack of elimination, rendering further absorption of medicines impossible; and here again idiosyncrasy of the individual plays no part. Or, again, that particular eliminative organ, by means of which certain drugs most frequently are thrown off, is diseased and feebly functioning, and then long-continued administration of a certain drug gives one an excellent opportunity to observe that long-bearded and exceedingly venerable therapeutic condition known as "cumulative action," a near relative of idiosyncrasy.

And thus it would seem that what is termed idiosyncrasy, implying personal peculiarity as regards drug-action, is frequently

merely the manifestation of peculiar drugs.

A. H. SOUTHWICK.

Limestone, N. Y.

FURTHER COMMENT ON SNAKE BITES

The editor or someone else has said that the January, 1911, number of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* is the best number ever issued by the publishers. He was right, I think; or, as one of my old masters would say (sacrificing grammar for emphasis), he was "very correct."

There are several splendid articles I would be glad to comment upon, because comment on an article causes many people to re-read such articles, and often with more benefit than results from the first perusal; but time and space must be taken into consideration.

Dr. Moody, page 83, tells us much truth about serpents. It is true that the poison of the serpent is not so fatal as many think. It is true that comparatively few serpents have any poison in their fangs. It is very likely true that some people die of fright and treatment after being bitten by snakes. But I cannot go quite so far as Dr. Moody.

Snakes in Idaho may not have the power of killing men with their poisonous fangs, but I can give the best of proof that horses, dogs, mules and other animals have been killed outright in the South by snake bites. Doctor Moody is right when he says that sometimes a snake has but little poison in its fangs. But at times the diamond-back rattlesnake in Mississippi has enough poison in its fangs to kill a mule within a few hours.

The cotton-moth (sometimes called the cotton-mouth, because its mouth is white as cotton) is another very poisonous snake. The bite does not often kill at once, but the poison is so strong that gangrene results, and sometimes large pieces of flesh slough off, enough to cause death, sometimes many days after the bite. I have known a dog to die, when not given treatment, in a few hours, after the bite of a cotton-moth.

For the shock resulting from a snake bite I know of nothing better than alcohol. I have used digitalis, strychnine, glonoin, and some other remedies, but none answers so well as alcohol for the shock.

But I did not begin with the idea of writing on the treatment of snake bites. I only want to say that snake bites are not so dangerous as many seem to think, and to express my appreciation of Dr. Moody's article, but with the above expressions as to the danger. I think the bite of some snakes are more fatal here than Dr. Moody seems to think they are in his field of labor.

C. KENDRICK.

Kendrick, Miss.

SODIUM CACODYLATE FOR SYPHILIS

I take this liberty of citing an experience with sodium cacodylate, which runs about as follows:

Patient, male, age 35, laborer, had syphilis with local sore one half year ago.

Recently I read an article by Dr. J. B. Murphy appearing in the *American Medical Association Journal* relative to the applicability and use of sodium cacodylate in the treatment of syphilis. I obtained and used this as carefully as possible, following his directions to the letter.

My case progressed satisfactorily for a week, when the reverse took place; the ulcer increased in size, with an increased area of infiltration and edema of the surface surrounding the perforation, headache of a frontal character became persistent, and there was some infiltration of the conjunctiva. This I presumed was due to a saturation of the patient with this arsenical preparation. However, I reduced my dosage in both size and frequency, but the results were no better.

Finally I abandoned its use entirely and reverted to the mixture of potassium iodide, mercury bichloride and succus alterans, with nuclein and the arsenates of iron, quinine and strychnine. Since then my results are more gratifying.

I write this to learn particularly whether or not you, yourselves, have had a like experience, or any of the "family."

I might add that the local treatment was principally that of a cleansing nature and tincture of myrrh applied directly to the ulcer.

What do you think about it, and if you now of anything I may have omitted, kindly

state it. If condemnation is any clue, then let me have it. I expect to get mine at the Commandery tonight, so just a little bit more won't matter.

W. C. GREENWALD.

Indiana Harbor, Ind.

[Dr. Murphy is a fine surgeon, but—have you heard of anyone else taking sodium cacodylate seriously as a specific for syphilis. Just at present there is a craze for arsenic; which will be expected (as "salvarsan" or otherwise) to cure all the parasitic and numerous other diseases, probably for the next five (?) years. *Après cela le deluge*. At the end of that time we shall know much more about the toxicology of the arsenic compounds, and perhaps have more faith in mercury.—ED.]

DEATH DURING CHLOROFORM ANESTHESIA DUE TO HYDROCYANIC ACID, AND ITS PREVENTION

In an article entitled "Sudden Death During Chloroform Anesthesia," appearing in *The American Medical Compend* of 1907, June issue, attention was called by the writer to the chemical action of the vapors of chloroform in the presence of ammonia gas, at the same time explaining how, during the process of metabolism, ammonia gas was formed in the human body and converted into urea.

In many experiments on lower animals, both prior and subsequent to writing that article, sudden death was produced by feeding the animal a meal of proteids, anesthetizing with chloroform, then injecting from 20 to 60 minims of ammonia water hypodermically.

While these experiments strongly favored the theory that chloroform united with the ammonia in the blood and formed hydrogen cyanide, that is, prussic acid, the writer was never fortunate enough to discover the presence of hydrocyanic acid in the blood of animals dying in this manner.

It has remained for two foreign chemists, B. Hancu and V. Gomoiu (see *Chemical Abstracts*, Oct. 20, 1910, p. 2842) to settle beyond all reasonable doubt that it is the hydrogen cyanide or prussic acid, that kills,

and not the chloroform as such, for the former deadly poison was found by them in the blood of two patients who died, one during and the other immediately after the anesthesia.

I have been asked by many whether such deaths are preventable and my answer is in the affirmative. Not only are these fatal terminations preventable, but should absolutely be prevented.

Under normal circumstances, the amount of ammonia in the blood depends upon the adjustment between the generation of acid substances during metabolism and the supply of bases in the food.

Formation of ammonia is the physiologic remedy for deficiency of bases. Under normal circumstances ammonia is kept at a minimum, being finally converted into the less toxic urea, a substance the kidneys easily excrete.

The defense of the organism against acids which are very toxic is an increase of ammonia formation, or more correctly, proportionately less of the ammonia is converted into urea.

Thus, when a patient whose blood contains a sufficient amount of ammonia to permit chemical combination with chloroform presents himself for anesthesia with the latter, his minutes of life are numbered, and he usually expires during the beginning of the anesthetic condition.

The physiologic preventive of excessive ammonia formation in the economy would be a diet tending to reduce acidity of the blood. Correctives are to be had in the administration of the fixed salts either of potassium or sodium, together with a suitable hepatic stimulant.

A sufficient number of deaths during anesthesia where chloroform is used supervene annually to justify a serious effort on the part of the medical profession to prevent these fatalities, for the time will soon come when the term "heart failure"—that kindly cloak behind which we are wont to take refuge at certain embarrassing moments—will no longer be accepted as a cause for sudden deaths where chloroform was the anesthetic agent.

LUCIEN D. CLARK.

Akron, O.

[This is an ingenious explanation, which may throw some light upon the too-frequent cases of sudden death, following the use of chloroform. Whether this theory will stand the test of modern physiological chemistry, or not, we leave for the experts to decide. But this is certain: There are altogether too many of these deaths—and very, very many of them are not "reported." Chloroform should be used as sparingly as possible—at best it is a dangerous substance—and this is made possible by the preparative use of the hypodermic anesthetic combinations.—ED.]

DID THIS BABY HAVE TYPHOID FEVER?

The infant daughter of W. W., age 18 months, was indisposed at the same time as her father, who developed smallpox December 15. She was vaccinated without result, although her mother and sister were successfully vaccinated at the same time. The baby had one typical pustule on the left cheek, which was not noticed until vaccination failed to take. Her health became poor, the weight failed, and she became weak and peevish, with a return to her former light-heartedness in a few days.

February 2 she refused to be moved from her bed, and showed a desire to be let alone, lying quietly without pain, sleeping a great part of the time, refusing nourishment. The temperature was 99.5° F., in the morning; pulse, 120; bowel movement very foul; skin, dry. There was little change in her condition for seven days, the temperature running an even course of 99° to 100° F. in the morning, and 101.5° F. in the evening; moaning when disturbed, rousing every two hours when nourishment was given.

The second week the temperature was slightly higher, showing 101° F. in the morning, and 102.5° F. in the evening—with remissions; pulse, 140°. Somnolence continued, weakness was more pronounced, but nourishment was taken more readily. Bowel movements were dark, with diminished odor.

The third week was ushered in with cardiac failure; pulse, 180; skin, cold, clammy; a bluish shade around eyes and mouth. Stimulants brought reaction, but

the child gradually failed, dying on the 20th day.

During the last week, the temperature fell to the range of the first week; stools were free from odor, turning yellowish.

The treatment followed was the usual antiseptic treatment with the sulphocarbo-lates and copper arsenite, and brucine as a general tonic. Atropine was given for the somnolent condition but without effect. Concentrated nourishment was given every two hours in small quantities. There was no tympany. Nuclein was given on tongue, the last few days, in 10-drop doses every six hours.

Was this typhoid fever?

R. J. SMITH.

Collinston, Utah.

[We certainly should be unwilling to risk a positive diagnosis in this case. While the symptoms are of a "typhoid" character, this fact by no means proves that this was typhoid fever. It is unfortunate that no Widal reaction was taken. Some of these supposed-to-be typhoid fever cases turn out, on close examination, to be acute miliary tuberculosis. What say the family?—ED.]

A NICE COMPLIMENT

The January number of *CLINICAL MEDICINE* is a jewel of the first water—none like it to date for artistic make-up and for the variety of practical condensed contents such as the busy physician needs in everyday practice. *CLINICAL MEDICINE* now excels any medical monthly journal published, in clearness of type, in practical information, and in literary cleanliness in all its contents, even to its ads.

I sincerely appreciate what you have done to help the medical profession to elevate itself to a higher plane of usefulness and honor (notwithstanding that *The Journal of the American Medical Association* still fails to notice that such a journal as yours exists) for the benefit of all humanity. Continue to improve your journalistic in the future as rapidly as you have done in the past and you can smile at your detractors.

Pardon my hasty scribbling—I could not desist from saying a few words to help you stiffen your spinal column.

Yours fraternally,

J. W. HOFF.

Ann Arbor, Mich.

TWO NEW SIGNS OF SCIATICA

Sabrazes says (*Gaz. des Hop.*, Nov., 29, 1910, p. 1850.) that pain on pressure upon the tibia is characteristic of sciatica. There exists also in this affection a difficulty in crossing the affected leg upon the sound knee, which is flexed at right angles.

STRIKING RESULTS IN A CASE OF BRONCHOPNEUMONIA

In the afternoon of December 30, 1910, a lady asked me to visit her grandson who had been sick with an inflammatory condition of the lungs for about a week and a half. I secured the following information:

Since the beginning of illness a brother physician had made several visits, in the course of which prescriptions had been filled and refilled repeatedly and several applications of antiphlogistine made to the chest. When the name of the first physician in attendance was asked for there was a slight embarrassment. I asked to be shown the patient's medicine bottles and powder boxes, and unconcernedly I took notice of the doctor's name. I wondered why this family should be inclined to lose confidence in a man whose reputation is of no small degree.

The mother gave me the following statement:

On the previous evening the doctor had made his last visit. He examined the little patient and said that the right lung was still somewhat affected anteriorly; the temperature was 100° F. The latter statement the woman received with suspicion, claiming that the child was almost burning up with fever and that the pulse and heart were going at a galloping gait. Having completed the examination, the doctor thought that no further medicines were required as the patient was almost well again. Her suspicions still further aroused, the mother

began to reproach the physician for his seeming indifference, for taking fees without showing results satisfactory in return, and told him that there surely must be some better medicines than his own. These reproaches the doctor answered by stating that no one could do better than he had done and no remedies could produce results for the better more speedily than the ones he prescribed. The final result was that he advised her to call in another physician and discontinue his own services.

During the few minutes in which this information was supplied I watched my patient-to-be and his unsatisfactory environment. Upon entering the room (one of a light-housekeeping apartment) I was repelled by the extreme foulness of the air in which father, mother and the little patient were breathing, with every window closed tightly all night. Suspecting pneumonia, I at once pointed out the vast importance of fresh air in the sickroom, especially of this patient. In order to make a strong impression on their minds, I used a drastic example, stating that for three persons to breathe each other's expired air, in a small closed room like this one, was just as bad as for three persons to mix each other's bath water after bathing in it and then use it to drink.

The history, *status præsens*, and treatment of our little patient were as follows:

P. A., male, age 22 months. Had enjoyed good health up to the time he was placed in the care of another woman, during the absence of the mother several months ago; then had an attack of acute bronchitis, according to the statement. Present illness began with a similar condition about two weeks ago.

When first seen, the patient seemed comatose and cried when awakened. Extremely fretful and stubborn; pallor of face marked; respiration short and hurried; skin dry and hot; clear and anemic in appearance. The child refused to open mouth and show tongue, although intelligent enough to do so; no forced examination attempted. Upon percussion of thorax various degrees of dullness were obtained over different areas of both lungs, especially posteriorly; likewise some hyperresonance. Percussion induced coughing and crying.

Puerile vesicular breathing was almost entirely lost both anteriorly and posteriorly; breathing harsh, with small and large moist râles; over left lower lobe, in midscapular line, marked bronchial breathing and a peculiar highly ringing sound like the overtones produced on an instrument when one musical sound is struck. This symptom was noted only while patient was crying. Respiration irregular in time; pulse, 148, full and strong; temperature, 104° F. per rectum.

Diagnosis: Bronchopneumonia, secondary to a neglected bronchitis.

Treatment. Since patient's bowels had moved freely and often (probably due to former treatment), no time was lost with the administering of the usual clean-out remedies. Something had to be done for this patient at once.

For the control of fever and pulse-acceleration my choice fell upon the defervescent use of aconitine, digitalin and veratrine. So, according to the child's age, I placed 3 granules of aconitine, 1-134 grain each; 3 of digitalin, 1-67 grain each; and 3 of veratrine, 1-134 grain each, in twenty-four teaspoonfuls of water, with the direction to administer teaspoonful-doses every half hour for three hours, and then every hour until signs of improvement set in.

The accumulation of secretion in the air-passages induced me to ask for another portion of twenty-four teaspoonfuls of water, in which I dropped 24 granules of emetin, 1-67 grain each; and 24 granules of sanguinarine nitrate, 1-67 grain each, ordering a teaspoonful of this every half hour. Both solutions were sweetened with a granule of saccharin, 1-67 grain.

I noticed that the mother was watching me closely and could read by the expression on her face the doubtful attitude of her mind as to the efficiency of those few little pills; however, a granule of carmine in each glass made her feel that her child was to receive some real medicine, after all.

While the granules were dissolving, I called for material necessary to make a cool, wet chest-pack. But here, also, I had to deal with some opposition on the part of the mother, as she had, and many others have, used only hot applications in such conditions.

After assuring her that I had used this pack in many cases successfully, she allowed me to proceed uninterrupted, and within five minutes we noticed the marked effect of the pack on the patient's behavior. He even gave me a smile before I left.

I ordered the pack substituted by another just as soon as the first became hot and the patient restless. That evening the mother gave two additional packs, being convinced now of the beneficial effect of the treatment. After the third pack the little fellow had a hard coughing spell through which a large amount of stringy, glairy mucus was brought up by the retching and vomiting.

I did not call again that evening, but the mother told me the following morning that the patient had sat up in bed about an hour after midnight and wanted bread and milk.

When I called on December 31, at 9:30 a. m., the mother received me with gratitude, and wondered whether or not the child had really been afflicted with pneumonia. The patient did not make the impression of being a sick child, although occasionally there was an attack of loose cough. On examining the lungs I was also very much surprised to find a calm and soft puerile breathing anteriorly and posteriorly excepting in the area mentioned over the left lower lobe, where breathing seemed more indistinct and distant. Pulse-rate 90, fairly strong; temperature, 98° F., per rectum.

The packs were discontinued, and expectorant cough remedies, a dose every two hours prescribed. The temperature being somewhat subnormal and the heart needing a tonic, I placed 12 granules of brucine, 1-134 grain each, and 12 of cactin, 1-67 grain each, in 12 teaspoonfuls of water, sweetened with saccharin, and ordered a teaspoonful every two hours. I also ordered a light, nutritious diet.

Of course, it goes without saying that as soon as the patient was in his first pack, I provided for an ample amount of fresh air and called much earlier the next day in order to learn whether or not the window had been kept open that night. On January 1, about noon, the patient refused to stay in bed; wanted to play and eat. Respiratory sounds almost normal; a few moist

râles over large bronchial tubes; an occasional attack of loose cough. Temperature, 98.6 ° F., per rectum. Heart action good. I left the patient on the arsenates of iron, quinine and strychnine, with nuclein, three times a day.

No one could convince me that this was not a well-established case of broncho-pneumonia, and I think the remedies used internally, together with the external application did the good work. These striking results were brought about by: (1) proper internal medication; (2) proper external applications; and (3) proper hygienic measures.

What results would Christian science or the like have had in a case like this one?

I shall let the capable editor pass upon this humble contribution to the "family" conversation.

J. FALTERMAYER.

Chicago, Ill.

[And the editor submits it to the "family" for comment, with congratulations on the skilful treatment and the favorable outcome.—Ed.]

MODIFICATION OF TYPHOID FEVER BY CALCIUM SULPHIDE

It has always been my understanding that the editor of *CLINICAL MEDICINE* invites those who use the active principles in their practice to make such inquiries from time to time as may be of benefit in the use of this class of medicine. It has never before seemed necessary for me to resort to you for information, and for that reason I shall take the liberty of asking a very long question and one that to me presents some difficulties, in the way of answer. As a continuation of this preamble I must recite the histories of two cases.

The first patient is a boy of 15 years, the brother of Dr. H. M. Greene of this city. While attending school in a neighboring city he gradually became ill and finally was so sick that the doctor decided to bring him home for treatment.

His condition was as follows: A gradually increasing illness that was accompanied

with some cough, nosebleed, tympanites and tenderness of the abdomen, some disturbance of the bowels, delirium, temperature of from 100° to 104° F., rose-spots on the abdomen, enlarged spleen, and so on. In short, beyond the shadow of a doubt, he had typhoid fever.

At about the second week (the fourteenth day) of confinement to bed he developed a severe infection of one parotid gland. (I should have mentioned that there is an epidemic of typhoid in the city where he was at school.) In order to control the infection of the parotid we decided to give calcium sulphide. It was begun at a time when the temperature was 105° F. and pulse 108, the neck much swollen, the edema extending inward so as to push the tonsil well toward the middle of the throat.

The calcium sulphide was given in 1-grain doses every hour or so for a period of about forty-eight hours, when the temperature began to fall and by the time the third day was passing he had a sub-normal temperature and a pulse of 76. From that time to the present he has had no rise in temperature, except for a few hours, on two or three occasions, when it went to 99° or 99.5° F. Ten days have elapsed and he is now sitting up.

Bear in mind that all this occurred right in the middle of his attack of typhoid fever and also that the "typhoid condition," with delirium, loss of appetite, and other symptoms, continued for nearly a week after the use of the calcium sulphide.

The next case was in all respects similar to the preceding one, except that the patient is a boy of seven years and has been all the time here in Portland, and his condition has not been so markedly typhoidal. I had, however, made a diagnosis of typhoid fever, and two days ago began the administration of calcium sulphide, 1-2 grain every two hours. At this writing his temperature has fallen from 104° F. to 100° F. and he is to all appearances going to get well *right now*.

Now, it is very little use to talk about "aborting" an attack of typhoid fever, as might appear from the foregoing, but, still, I should like to know "what the blazes" happened in these cases? When

the first fall of temperature occurred in Dr. Greene's case it went down to 97° F. and the pulse to about 70. We were alarmed, of course, and ready for trouble, but the patient seemed to be in perfectly good condition and during his rational hours derided the idea that he was very sick. I thought he was, indeed, a very sick boy.

I want to know whether calcium sulphide has any antipyretic action when given in large doses? Does it depress the heart in large doses? Also, will it move the bowels? Are there any untoward effects whatever likely to result from large doses, and if so, what are they? I know nothing about the physiologic action of the drug, and I want to know.

My theory to account for an apparent crisis in Dr. Greene's case was evolved as follows: That the infection, as manifested by fever, rapid pulse, tympanites, and so on, is not so much due to the action of the typhoid bacillus as it is to the action of other pathogenic germs, and that these other pathogenic microorganisms occur mostly in the intestine. I also believe that typhoid fever, like certain other diseases, could be easily handled by the average individual, if he had only the pure culture of the typhoid bacillus to cope with. If the crisis in this case was brought about by the drug given, it was because the calcium sulphide killed all pathogenic action in the intestine and left a clear field for the patient and the typhoid germ to fight it out.

By the same token, why doesn't the calcium sulphide kill the typhoid bacillus? Surely, it can not, because of the distribution of that germ through the body-tissues. I believe there was evolved within the body of the patient a sufficient amount of antitoxins to cure the typhoid fever at any time, if only these antitoxins could have acted without the interference of other forms of infection, and that the calcium sulphide did perhaps give the patient a clear field for his battle. I am, however, quite at sea in the matter and consider it the most remarkable thing I have ever seen.

If you consider this matter to be of any benefit to readers of CLINICAL MEDICINE

I should be most glad for you to give it publicity; and I should also appreciate an early reply, unless I ask too much in thus taking your time. This matter, it appears to me, either is of superlative value or of no value whatever.

I am deeply indebted to Dr. Greene, for the treatment of his patient was conducted entirely by himself, and I only saw him from time to time and had opportunity to observe the foregoing. My own case, however, appears to be following his to the letter.

JAS. H. BRISTOW.

Portland, Oreg.

[Dr. Barstow's two experiences are certainly interesting. While calcium sulphide has never been recommended, so far as we know, as having any specific action in the treatment of typhoid fever, it seems to us that its use in this disease is entirely rational, though our theory as to its action is somewhat different from that of the Doctor. But first let us answer his questions—if we can.

So far as known calcium sulphide has no direct antipyretic action. On the contrary Rabuteau (quoted in "The Text-Book of Alkaloidal Therapeutics") says that it may possibly produce some fever, and according to the same writer it increases the activity of the circulation, also stimulating diuresis and diaphoresis, and loosening the respiratory secretion. It seems to have no depressing action and may be given in very large doses with impunity; 50 grains or more have been given daily in cases of gonorrhea, with benefit and no harm. It has no reported cathartic action. The reduction of temperature in these two cases is probably due to its action upon the cause of the disease—its destruction of the germ.

Calcium sulphide seems to have a decidedly antimicrobial or antizymotic action *in the blood*. While we do not know the specific cause of scarlet fever, measles or whooping cough, we do know that calcium sulphide does decidedly modify the course of these diseases, sometimes preventing or aborting them. Its action seems proportioned to the degree of blood-saturation.

Can we not assume it as rational that the remedy might have a similar action in typhoid fever. This seems more logical than to count it among the intestinal antiseptics. We are convinced that it is rather an *internal* antiseptic. We have occasionally recommended its use in typhoid fever, in association with the sulphocarbolates, the intestinal clean-out, adjustment of circulatory equilibrium, and other indicated remedial methods, but we have never received reports enough to warrant deductions.

Perhaps Dr. Bristow's paper will elicit investigation and stimulate comment.—ED.]

A PRAYER

Apropos to "A Great Doctor's Prayer" on the cover of your March issue, I would like to call attention to the following:

These are the gifts I ask
Of thee, spirit serene:
Strength for the daily task,
Courage to face the road,
Good cheer to help me bear the traveler's load,
And for the hours of rest that come between
An inward joy of all things heard and seen.

These are the things I fain
Would have thee take away;
Malice and cold disdain,
Hot anger, sudden hate,
Scorn of the lowly, envy of the great,
And discontent that casts a shadow gray
O'er all the brightness of a common day.

I do not know the author of these lines, but they must have been written for or by a physician.

H. L. HARLEY.

Pleasantville, N. J.

A UNIQUE CONGRATULATORY LETTER!

Carissimi Doctores:—Tertio sive quarto die autea recepi non nulla exempla medicinarum alkal, una cum libello "Digestis Therap." et parvulis monographiis. De qua re iterum iterumque ago vobis gratias, nec desinam agere. Restat ut accipiam exempla JOURNALI AM. CLIN. MEDICINAE pro mense curr., Martio, 1911. Si quidem nondum est typis excussum neque transmissum officio postali, res bene se habent. Sin autem jam transmissum est neque allatum mihi, adjuvetis me, quaeso, ut libellum meum recipiam. De quo si certi-

orem me feceritis, aequiorem mentem servabo.
Summo cum respectu ac diligentia hoc
datum est a

JOH. BENJ. LAUDA.
Olim, M. S.

In oppido Murchison, Texas.
m. Martio d. 10, 1911.

[We receive communications in pretty
nearly every language under the sun, but
this is, I think, the first written to us in
Latin—and it's mighty good Latin too.
Get out your old dictionary and "Go to
it."—ED.]

A CHIRURGICAL MYTH

The antiseptic tweezers and the chloroform-cup
Were lying in the basin when the needle gamboled
up,
They looked upon the creature with a loathing
undisguised,
It wasn't disinfected nor it wasn't sterilized.

They said it was a microbe and a hotbed of disease;
They steamed it in a vapor of a thousand odd
degrees,
They froze it in a freezer as cold as banished hope,
And washed it in permanganate and carbolated
soap.

In sulphureted hydrogen they steeped its little eyes,
And threaded it with silk worm of number two in
size;
Then donned their rubber mittens and grasped it
by the hand,
And elected it a member of the "fumigated band,"
C. R. LAYTON, M. D.

Redmon, Ill.

AN APPROPRIATE SPRING POEM

One of the poems which Mr. E. R.
Pritchard, secretary of the Chicago Health
Department, occasionally recites to please
his friends is the one that we print below.
Who the author of it is, we do not know.
Perhaps you do. If so, won't you tell us?
It sounds like Riley, but it isn't Riley—
though "just as good."

I wonder if most of us don't feel, right now,
like the old Indiana farmer, who, we can
imagine, is telling his feelings in this ex-
quisite (no, that isn't just the right adjective
—perhaps you can think of a better one)
piece of verse. I know I do.

NOT RIGHT PEERT

Ain't felt right peert fer a week or two;
Been sorter cranky an' restless an' blue;
No p'tickler reason, es I ken see;

Can't find anythin' specially wrong wi' me
Jes' don't feel frisky an' don't wanter do
A goldarn thing that I don't hev to;
Food don't taste jes' 'xactly right;
Sleep is kinder broken up at night;
Don't wanter set still and don't wanter walk;
Don't wanter keep quiet, and don't wanter talk,
Nothin' to hinder me from doin' jes'
Th' very thing thet'll suit me bes';
Yet when I'm doin' jes' what I wanto to
I find it's jes' what I don't wanto do.

Now I wonder
What's the matter
Wi' me, by thunder!
'Tain't fever, sure—for my heat ain't riz;
'Tain't biliousness ner rheumatiz;
'Taint my head, fer I think right smart;
'Tain't my liver, ner yet my heart;
'Tain't stomach, ner gout then goldarn me,
'Tain't nothin' at all, es I kin see;
En' yet it's somethin'—guess I'll go
An' see th' doctor; he'll sure know!

Seems t' me I remember this very same thing
Came on about this time las' spring;
An' th' doctor doped me with nasty stuff
By th' gallon, an' I bought drugs enuff
T' start a store; but Lordy, they
Couldn't drive that gnawin' inside away;
Somethin' jes' a-gnawin' at my inwards,—th' same
Symptoms thet I hed when th' las' spring came
Gosh! what's th' use o' seein' th' doc;
He ain't got nuthin' et all thet'll knock
This here trouble thet allus comes
When th' birds all sing an' th' honey bee hums;
When th' ice breaks up an' th' streams all roar;
An' th' soft air blows through th' open door;
When th' v'lets come, an' th' grass blades sprout,
An' the sun gits warm, an' th' world gits green,
An' a feller gets ornery, restless, an' mean;
Thar ain't no doctor in any place
Es kin properly diagnose his case.

The only cure fer a man I know
Is t' git right out o' town an' go
Where th' wil' ducks swarm an' th' geese go by,
An' th' trout an' bass are a-jumpin' high;
Th' on'y thin' thet'll cure him then
Is t' git away from his feller men,
An' loaf all day by some laffin' stream
An' fish an' whistle an' sing, an' dream
An' listen t' birds an' bugs, an' hear
The voice o' th' woods in his eager ear,
An' smell the flowers, an' watch th' squirrels,
An' cast a fly where th' eddy whirls,
An' fergit that there's cities an' houses an' men
Fergit thet he's got ter go back agen
Fergit, when on moss-grown bank he's curled,
Thet there's enythin' else in th' whole wide world
But jes' him an' th' birds, an' th' bugs an' things,
Thet live right thar where th' wild stream sings.

Having read the preceding the following
is naturally in order. The author of this,
also, I am unable to give, and therefore,
ask for information from members of the
family.

It seems to me I'd like to go
Where bells don't ring nor whistles blow,
Nor the clocks don't strike nor gongs don't sound
And I'd have stillness all around.

Not real stillness, but just the trees'
 Low whispering, or the hum of bees,
 Or brook's faint babbling over stones
 In strangely, softly, tangled tones.
 Sometimes it seems to me I must
 Just quit the city's din and dust
 And get out where the sky is blue;
 And say, how does it seem to you?

And then "our own poet" had to chip in.
 Here's his offering:

But my dreamin' friend, did you forget
 There's a game today—already, yet?
 That we who read the baseball dope
 Have our jew'ry hooked on the Cublet's hope?
 When Brownie pitches, an' his salary wing
 Is workin' right, it's no time to sing
 Of birds, an' flowers, an' fish, an' bees,
 An' the voice of brooks, or the smell of trees!
 Forget it, pal, an' come with me
 An' I'll cure your grouch—Ah! you shall see
 Chance line it over the club-house roof,
 Honus fan agen, an' Heinie hoof
 Like a frightened deer, an' Evers there
 Will merkleize them dubs fur fair;
 An' the men'll holler, an' the wimmen scream
 When we scuttle the ship of that Pirate team.
 An' then, my boy, you'll feel like you uster;
 As peert as a yearlin' bantie rooster!
 Why talk of squirrels and fish, just when -
 What's that you say? Cubs lost agen?

Oh rats! Where is that country real estate of
 yours anyhow?

MEDICAL HAPPENINGS

The *British Medical Journal* tells us that Alston has noted improvement in cases of yaws, treated by injections of salvarsan or 606.

The next meeting of the American Medical Association is to be held in Los Angeles, California, June 27-30. We shall be there and hope to meet you.

Does any one who reads this want to employ an able man to keep books, make collections, look after his office and do any necessary outside work. We knew a good man—one who can do literary work also if required. Write us.

Milian, at a meeting of the Paris Medical Society, has reported a case of reinfection with syphilis after an apparent cure by 606. This is one of the strongest arguments yet advanced to show the completeness of the cures worked by this remarkable remedy.

In a letter just received from Dr. Arthur C. Bell, Dallas, Texas, he writes that he has

recently removed a tumor weighing fifty-five pounds from a woman who only weighed seventy-five pounds after the operation. The patient made a nice recovery. That certainly is some surgery!

The Mann Bill, changing the name and adding to the scope of the Public Health and Marine Hospital Service, passed the last Congress. It is now the Public Health Service. Our congratulations to General Wyman, an esteemed fellow member of The American Medical Editors' Association.

Schræder denies that the sudden withdrawal of morphine in the treatment of drug habitués is dangerous. At Breslau abrupt withdrawal has been the rule for years and alarming symptoms have not been noted. The morphine is replaced by veronal and hyoscine. Patients protest vigorously against withdrawal but this is to be expected. The management does not differ greatly from that of alcoholism.

The first bill ("Senate 1") to be introduced in the U. S. Senate during the extra session of Congress, just convened, was Senator Owen's bill "to establish a Department of Health." The bill proposes that the new Department shall absorb The Public Health and Marine Hospital Service, the Bureau of Chemistry from the Department of Agriculture, and the Division of Vital Statistics from the Department of Commerce and Labor. There are to be eight Bureaus, all told.

Prof. Wm. Lee Secor has been compelled to leave St. Petersburg, Florida, on account of rheumatism which affected him there. He has located in Kerrville, Texas, a hilly country near San Antonio. Here he is equipping the Kerrville Hospital and Sanatorium. Dr. Secor should do well. As a student he distinguished himself, taking the Hare Gold Medal on therapeutics, the year he graduated at Jefferson Medical College. For several years he taught in the Chicago medical colleges, before resorting to the south to devote himself to sanatorium work.

The region around San Antonio has long been known as a sort for patients suffering

with pulmonary troubles, and Dr. Secor's sanatorium will offer one more means of treating these patients with strictly scientific up-to-date methods.

—
This year the American Medical Editors' Association meets in Los Angeles, just before the meeting of the A. M. A. The president is Dr. J. MacDonald, editor of *The American Journal of Surgery*. The fact that he is "on the job" assures a fine and profitable session. Every medical editor who is not already a member should join at once.

—
The medicopolitical pot is boiling in Chicago. President Bartzen, of the County Board, has shaken up the dry bones of medical precedent and self-constituted authority in the management of the public institutions, as never before in the history of the county. The Cook County Hospital is being completely overhauled, and the staff reorganized.

—
Dr. John B. Murphy, president-elect of the American Medical Association, and Dr. E. Fletcher Ingals, well known to all former students of Rush Medical College, are both sick in Chicago with typhoid fever. Dr. Murphy, it is said, is past the critical stage of the disease, but Prof. Ingals is still very ill. Shall we remind these distinguished gentlemen that typhoid fever is a filth disease?

—
The Chicago Tribune tells us that Caruso, the great operatic song bird, will be unable to sing again this season. We are informed that four doctors have made a special study of his throat. The most interesting item furnished by the *Tribune*, however, is that "the ailment from which Caruso is suffering is, according to the official diagnosis, poisoning of the *sacrothyroid* glands." Is this another of the eccentricities of genius?

—
Recently *The Journal of the American Medical Association* announced that match manufacturers had abandoned the use of the poisonous white phosphorus, felicitating this industry, on behalf of the medical profession, for the change. Now comes Dr. Robert H. Ivy who in the number of

the *Journal* for April 8 says that white phosphorus isn't so bad after all, that there is no danger from it whatever, unless it is handled with inexcusable ignorance or negligence. Whom are we to believe?

—
The New York World has been investigating the remedies used in filling prescriptions in New York City. Three hundred samples were taken from many different drugstores in all parts of the city and submitted to careful examination, under the direction of Mr. Virgil Coblenz. The results were simply astounding. Of special interest were the variations in the strength of tincture of digitalis. But why anticipate? The whole story will be in *CLINICAL MEDICINE* next month. Be on the lookout for it.

—
Two New York physicians, Drs. Block and Hopkins, one a psychologist, the other an alienist and neurologist, have started a psychologic laboratory for the convenience of physicians. They propose to treat only patients recommended to them by physicians, using the psychotherapeutic methods now in vogue, including Freud's Psycho-Analysis, Block's Relaxation, Hypnotism, memory and association tests, etc. They have established offices at the Hotel Astor, 44th Street and Broadway, and have hours on Saturday afternoon from two until five o'clock.

—
The thirteenth annual meeting of the American Proctologic Society will be held in Los Angeles June 26th and 27th, just prior to the meeting of the A. M. A. The president this year is Dr. George J. Cook, of Indianapolis. As usual a splendid program is presented, including papers by such men as Earle of Baltimore, Hanes of Louisville, Cooke of Nashville, Jelks of Memphis, Pennington of Chicago, Martin of Philadelphia, and many others. We urge all of our friends who are interested in this special field of practice (and what general practitioner is not?) to go early enough to the A. D. W. meeting to hear these papers. An especially interesting feature on the program is a paper to be presented by Dr. A. Teirlinck, of Gand, Belgium.

State Board Examination Department

Edited by R. G. SCHROTH, M. D., 546 Garfield Ave., Chicago, Ill.

[EDITORIAL INTRODUCTION—We take great pleasure in introducing Dr. Schroth, who is to edit this department, to the readers of CLINICAL MEDICINE. There is probably no man in America who has had such a large and varied experience in preparing medical students and physicians for the various state-board, hospital-internship and Army and Navy medical examinations. Not only does he give private instruction, but he has public quiz-classes and regular courses of study, primarily with the end above-suggested in view, but secondarily as a real and exceedingly valuable “brushing up” for those who have become “rusty” in their technical medical knowledge. In doing this work he has evolved unique methods of imparting knowledge which enable him to get the maximum into a man in the shortest possible time; and as a consequence his students rarely fail.

We want to urge every reader of CLINICAL MEDICINE to follow this new department closely. No matter if you are not going away from home to a new location—it will prove an invaluable post-graduate course, just the thing to supplement our own correspondence work, and it will make you a better doctor. Write to Dr. Schroth. Tell him your troubles. Ask his advice and help. In the next number, if you want to test your powers (as you should), write out in full the answers to the questions which will be given and mail them to Dr. Schroth, who will give you a full report, with rating and advice as to how you can do better work.]

FOREWORD

Owing to the short space of time available, in which to prepare an article after being appointed the “State Board Editor” of this journal, and also because I have had a State Board class in session until within a day or so of the time limit on the article, it has been

practically impossible to get up a suitable article on “Questions and Answers for State Board Examinations,” which would do justice to this journal, and be suitable for the work, as it should be, and as it will be conducted in the future.

The questions given below were from a recent examination given by a State Board of a state of the middle west. The answers published were written in my office by a physician who was contemplating taking an examination after having been prepared by me for about two or three weeks. He wrote these questions with the request that his name be not published.

He happens to be a man who is above the ordinary as to preliminary education, has a retentive memory, is a good student, and his papers should receive a high marking; the answers are generally considered highclass.

Ten minutes were allowed to answer each question, in other words, an hour and forty minutes for each ten questions.

While there may be many points which could be added, and others which could be made more specific and to the point; others not answered exactly as to the purpose and extent which the formulater of the question intended, at the same time the answers show intelligence all the way through. As in all examination papers of this kind, there were some misspelled words, which were corrected, also a few mistakes, but these are found in all examinations.

This explanation is made to show the reader what is required, and what a person can do in so short a space of time. Hereafter it will be the earnest endeavor of the editor of this department to write articles which will be of benefit to those who may be interested in preparing for state board examinations and to give information which will be of the greatest advantage to the readers of CLINICAL MEDICINE.

R. G. SCHROTH, M. D.

CHEMISTRY

1. (a) Give a test for hydrochloric acid. (b) Why can this test for hydrochloric acid not be used in case of the gastric juice?

(a) The vapors of HCl turn moist litmus red, and give off dense white vapors with ammonia. (b) Because the HCl in gastric juice is associated with organic acids.

2. (a) If hydrogen and chlorine are brought together in the dark, what action takes place? (b) If brought together in diffuse light, what action takes place? (c) If brought together in the direct light of the sun, what action takes place?

(a) Practically no action. (b) If brought together in diffuse light, practically no action takes place except in the presence of large quantities of vapor, when chlorine water may be formed. If calcium salts are present, calcium chloride or bleaching powder may be formed. (c) In direct light, Cl has a strong affinity for H, uniting to form HCl, driving off the O from water vapor which has a strong oxidizing effect on all organic matter.

3. Give the formula representing the composition of the compound that is formed by mixing concentrated nitric acid with hydrochloric acid?

$\text{HNO}_3 + 3\text{HCl} = \text{NOCl} + 2\text{H}_2\text{O} + 2\text{Cl}$. Aqua regia. It is used as a solvent for gold.

4. How does the gastric juice, secreted by the glands of the stomach, differ from other digestive juices?

It is acid in reaction, and contains pepsin and rennin. Other secretions are alkaline and contain other enzymes or ferments, which are different from those secreted in the stomach.

5. What is KCN? What is the fatal dose? What are the antidotes?

Potassium cyanide or prussiate of potash. It is a white, granular, rapidly diffusible salt and very poisonous. Under five grains is the fatal dose. Antidote, ferrous sulphate and ferric chloride, followed by a solution of carbonate of potassium which produces an inert compound. Antidotes are of little avail owing to the extreme rapidity of the action of the poison.

ETIOLOGY AND HYGIENE

1. Give the etiology of cerebral softening.

Infarct, trauma, hemorrhage, embolism, thrombi, tumors, or obstruction of a cerebral end artery, rendering the area anemic, and it undergoes further change. These pathological etiological factors may be due to syphilis, tuberculosis, infectious diseases, or alcohol.

2. Give the etiology of cerebral meningitis.

The most common and direct cause is the diplococcus intercellularis meningitidis. Inflammation of the pia and arachnoid membranes may result from traumatism or contiguous inflammation. It may develop in the course of infectious diseases or pyemia. It may be due to a deposit of tubercles in the membranes.

3. Give the etiology of locomotor ataxia.

Most common cause is syphilis. Other causes are exposure to cold and wet, concussion, overexertion and sexual and alcoholic excesses. May be secondary to other forms of spinal diseases, metallic poisoning, hereditary neurotic influences. The direct etiological factor is the proliferation of connective-tissue cells of the posterior column of the spinal cord, or posterior nerve roots or ganglia, pressing on the nerve fibers, preventing impulses from passing into the cord.

4. Name six efficient disinfectants, and name the different purposes to which each is especially applicable.

Sulphur, when burned in dry air, gives off SO_2 , destroys germs by its dehydrating action; if air is moist, H_2S is formed, which destroys germs by acid antiseptic action. Formaldehyde, for disinfecting purposes, in closed rooms, etc. Carbolic acid, $\text{C}_6\text{H}_5(\text{OH})$ for disinfecting clothing, etc. Bichloride of mercury, HgCl_2 , 1 to 1000 for the skin, 1 to 10,000 for mucous surfaces. Oxalic acid for the hands and porcelain ware. Chloride of lime, CaCl_2 , for disinfecting excreta, and effete material such as feces, urine, water closets, sewers, sinks, cess-pools, etc.

5. Upon what must the prophylaxis of typhoid fever be based? What are the possible and even probable means by which the bacillus may be conveyed?

The prophylaxis consists in securing a good water supply not contaminated by sewage, the avoidance of uncooked food that has been exposed to infection (oysters, raw vegetable—fruit, etc.). The disinfection of the patient's excreta, soiled linen, sterilize water and milk by boiling, screen houses, and prevent carrying of typhoid germs by flies and other insects. May be conveyed by contaminated drinking water, milk, oysters, contamination of food by flies (insects), animals, clothing, eating utensils.

ANATOMY

1. What changes take place in the ovum during ripening or maturation, before it is capable of fertilization?

The nucleus of the egg moves toward the periphery and divides by indirect division into two nuclei. One of these, called the polar body, is cast out of the egg. The other nucleus again divides into two, one of which, the second polar body, is also cast out. The remaining nucleus, called the female pronucleus, travels to the center of the egg. The ovum is then ready for union with the spermatozoa, or fertilization.

2. Classify and name muscles of shoulder joint. What structures are intracapsular?

Muscles of shoulder:

<i>Anterior Thoracic Region</i>	<i>Acromial Region</i>	<i>Dorsal</i>	<i>Scapular Region</i>
Pectoralis major	Deltoid		
Pectoralis minor			Supraspinatus
Subclavius	Subscapular region		Infraspinatus
<i>Lateral Thoracic region</i>	Subscapularis		Teres minor.
Serratus magnus			Teres major.

The long head of the biceps; synovial membrane and fluid, head of humerus, glenoid ligament; surface of glenoid cavity, intercapsular ligaments of Flood and Schlemm.

The bursae of the tendons of the muscles inserted into the greater and lesser tuberosities, sometimes communicate with the cavity in capsular ligament.

3. In oblique fracture of the shaft of the humerus immediately below the insertion of the deltoid, what muscles will draw the lower fragment upward?

Biceps flexor cubiti, triceps extensor cubiti, a part of the brachialis anticus, depending upon the obliquity of the fracture.

4. Give the origin, insertion, action, and nerve supply of the supraspinatus muscle.

Arises from the inner two-thirds of the supraspinatus fossa and adjacent structures and is inserted into the upper facet of the greater tuberosity of the humerus. Action, supports shoulder joint, assists deltoid to raise arm at right angles to the body and adduct the arm. Nerve supply, circumflex.

5. What are the two largest ganglia in the body?

Right and left semilunar ganglia.

6. Describe the celiac axis. What are its branches?

The celiac axis artery is the second branch given off of the abdominal aorta, anteriorly, and is about one-half inch in length; as soon as it arises it divides into gastric, hepatic and splenic branches and they supply the parts as named.

7. Why is the twelfth rib of importance to the surgeon, especially in connection with operations on the kidney?

It is of importance surgically, as it constitutes a landmark for locating the kidney. In nephrectomy the incision is made from 12th rib to a point just above the crest of the ilium. Twelfth intercostal nerve is sometimes low and may be severed.

8. What connects the choroid to the circumference of the iris? What is the function of the choroid?

The ciliary body: To nourish the retina and lens and to darken the cavity of the eye.

9. How is the suprarenal plexus formed? What is there remarkable about the branches of this plexus?

The suprarenal plexus is a sub-plexus of the celiac plexus, which is a sub-plexus of the solar plexus of the sympathetic nervous system, receiving fibers from the pneumogastric and splanchnics. It is remarkable for its large size compared to the small size of the organ it supplies, and the large size of its fibers.

10. Describe the boundaries of the cavity of the pelvis.

The pelvis is formed by the union of the innominate bones in front and the sacrum and coccyx behind. It is divided into "true" and "false" by a plane passing through the promontory of the sacrum and the iliopectineal line. The part above this plane (the false pelvis) is formed by the expanding iliac bones, crest of pubes. The part below (the true pelvis) has its boundaries divided into those of the inlet, cavity and outlet. The inlet is bounded by crest of pubes, iliopectineal line and promontory of sacrum. The outlet by pubic arch and rami of ischium, tuber ischii, sciatic ligaments and tip of coccyx. The cavity between the outlet and inlet is formed by the inner surface of the pelvic bones.

PHYSIOLOGY

1. Describe the functions of the red and white blood corpuscles and give the relative number of each found under normal conditions.

The function of red blood cells is to carry food and oxygen to all parts of the body and carbon dioxide and other effete material from the tissues to the lungs. The white cells take away the inflammatory exudate and broken down nitrogenous material as well as germs, and act as scavengers.

Red, 5,500,000 to 6m; white 7000 to 10,000 per Cmm; one white cell to every 800 red cells.

2. Describe fully the effect produced on the circulation by intravenous injection of normal saline solution.

It increases the quantity of fluid in the circulatory apparatus, stimulates the blood forming cells of the red bone marrow and acts as a tonic to the heart muscle and brain centers, assisting the blood in regeneration and preventing collapse of the veins.

3. If the auriculo ventricular valves are insufficient, during what period of the heart cycle will blood escape from the ventricle into the auricle?

During systole.

4. Supposing that pyloric and duodenal fistulae have been established so that there is no connection between stomach and intestines, the animal being fed through the mouth or by introducing food directly into the duodenum, which method of feeding will prove the most efficient? Why?

The duodenal method, because there are more ferments present, the food products are absorbed and the effete material can be passed through the natural channels. If taken into stomach by fistulous opening the residue of the food would have to be taken out again after juices act on it.

5. What condition is produced by removal of the pituitary body?

A morbid condition characterized by increase of the distal parts of the extremities in thickness, but not correspondingly in length, the bones of the hands and feet and face being especially affected. Some of the fibro-cartilages also the related soft parts undergo corresponding enlargement. (Acromegaly.)

6. What do you understand by internal secretion? Give examples.

The production of certain juices or substances which do not leave the body by ducts but which enter the circulation and influence metabolism either by forming an antidote to certain juices or secretions or inhibiting their action or in some unknown manner act on the nervous circulatory or muscular apparatus. Suprarenal gland secretion and thyroid gland secretion.

7. During visual accommodation, where are parallel rays of light brought to a focus?

On the fovea centralis of the macula lutea of the retina.

NEUROLOGY

1. Explain the difference between a neurosis and a psychosis. Give an example of each.

A neurosis is a disorder of the nervous system, not dependent upon any discoverable lesion.

A psychosis is a mental disease which generally has a discoverable etiologic factor.

Example: Neurosis, hysteria. Psychosis, delirium tremens.

2. Give briefly the symptomatology and diagnosis of so-called acute anterior poliomyelitis. State what has been brought out by recent researches into this disease.

Symptomatology: It occurs mainly in children during the teething period. Sudden onset, with convulsions, vomiting, diarrhea, delirium, headache, dull heavy pains in the back and in the extremities, and febrile symptoms. In a short time extensive palsy appears, followed by wasting and atrophy of certain groups of muscles. There may be incontinence of urine and feces; this is not permanent. Later the extent of the paralysis gradually diminishes until the loss of power and wasting are limited to certain parts that remain permanently deficient in nutrition, growth, and function. Sensibility is not affected. Degenerative reactions of nerves and muscle develop and the reflexes are enfeebled or lost.

(b) That it is a germ disease and contagious.

3. Give the treatment of herpes zoster.

The blisters should be protected by a dressing of ichthyol and flexible collodion, or a gelatin paste, medicated, if desired, with morphine, menthol, or some agent to relieve pain. Phosphide of zinc in the dose of 1-4 grain every three hours has been given with success. Phenacetin, antipyrin and sodium salicylate have been recommended for the pain. Morphine is sometimes required. Look after the general condition of the patient, in regard to diet, habits, and bowels.

PATHOLOGY AND BACTERIOLOGY

1. Give the pathology of cirrhosis of the liver.

The liver is hard and the surface irregular. It cuts with difficulty, revealing the hyperplastic bands of connective tissue around the lobules, which project from the cut surface. The color does not differ materially from normal. The liver cells are atrophied, particularly at the periphery of the acini; round cell infiltration is noticeable, and there is some proliferation of bile ducts.

2. Give the pathology of chronic peritonitis.

This condition is usually tuberculous in type, for we find tubercular areas of ulceration and caseation.

In syphilis there is a large amount of proliferation of connective tissue and gumma may be found.

The peritoneum is injected, lusterless and covered with lymph. The exudate into the peritoneal cavity is at first serous, and may later become fibrinous or purulent. It tends to become localized by the formation of adhesions in the peritoneal cavity.

3. Describe fully the pathology of typhoid fever.

There is inflammation, ulceration and hemorrhage of Peyer's patches, enlargement of spleen and proliferation of mesenteric glands and catarrhal inflammation of the intestinal mucous membranes, intestinal hemorrhages, ulcers. The tongue is dry, furred and fissured. There may be pathological changes in the parenchyma of other organs, such as cloudy swelling, fatty degeneration, especially in liver, spleen and kidneys and brain. Thrombosis, embolism, infarction, and phlebitis in distant parts may occur.

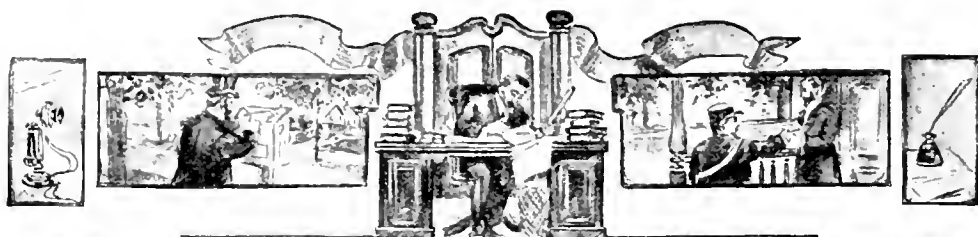
4. Describe the lesions found in the lungs in bronchopneumonia.

The lung contains scattered areas of consolidation, corresponding to individual lobules, which are usually pale and surrounded by congested lung tissues and filled with round cells and inflammatory exudate. Other areas are collapsed and appear blue. Normal tissue is hyperemic and hyper-resonant. The cut surface of a consolidated lobule is smooth and moist and on pressure exudes a frothy serum from the healthy portion and a grayish yellow fluid from the affected areas. The lobules stand out prominently. The collapsed areas are those from which the consolidated material is expelled.

5. Give the pathological anatomy in fatty degeneration of the heart.

Size increased, color yellowish streaked and softer than normal. On cutting, fat globules exude and the knife is oily. The fat is deposited in granules between the muscle fibers and beneath the pericardium. Protoplasm and nucleus are displaced but maintain their integrity. Later the muscle fiber undergoes fatty degeneration.

(To be Continued)



CLINICAL · MEDICINE POST-GRADUATE SCHOOL *&* THERAPEUTICS

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PART III—LESSON TWENTY

THE MANAGEMENT OF RHEUMATOID ARTHRITIS

It will not be denied that the various methods of treatment of what is usually termed acute rheumatoid arthritis are in the main unsatisfactory. The reason for this is not difficult to find, for we have to deal with a disease the causal conditions of which are not very well known and which, moreover, shows a marked tendency to be steadily progressive and is aggravated by occasional exacerbations of acute and more rapid extension.

General Considerations.—Whether a microorganism is or is not the etiologic factor in this condition still is a question. It seems certain, however, that we can not associate the diplococcus of rheumatic fever with rheumatoid arthritis, although an organism of a different nature has been demonstrated in the joints of a certain number of cases.

It is necessary to emphasize the distinction between the active stage of the disease and the sequel which it leaves behind, for even during the latter stage there is apt to be a progressive crippling and incapacity due to the increasing contraction of the atrophied muscles. Yet, in the two stages the indications for treatment are entirely different.

In the acute stage our main object should be to shorten, so far as it is in our power, the course of the malady, for the shorter its course the less will be the permanent injury

to the joints, structures and muscles, and the less the resulting deformity.

During the later stages, it should be our aim to minimize the crippling by judicious local measures. It is a striking fact that in the most severe cases in which disability compels repose from the beginning, the duration of the active stage is not infrequently shorter than in milder ones, when the patient has been at no time compelled to take to bed.

This suggests that absolute rest of the inflamed joints is of greatest importance in the early stages. If such rest could be enforced in all such cases at the commencement, we should see decidedly fewer examples of extreme crippling than we do at present. It follows that, if this is true, active local treatment, courses of bathing, and the like, valuable as they are in the later stages, are contraindicated in the acute stage, and experience bears out this inference. This fact is of supreme practical importance.

The conspicuous part played by muscular contraction in the production of deformities, and the fact that such contraction is secondary to the great muscular atrophy, which is a feature of the disease, suggest the advisability of massage as a preventive measure. This may be carried out even in the acute stage, provided the manipulation is strictly limited to the muscles, the joints being left

severely alone. We all know how difficult it is to secure the systematic carrying out over long periods of plans of treatment attended by no immediate benefit, being merely an insurance against future contingencies, but where such massage is systematically done, the muscular atrophy is certainly kept in check, and the ultimate gain well repays the expenditure of trouble and patience. Where there is little atrophy, there will be little contraction-deformity, but the actual damage to the joints themselves may nevertheless produce no slight crippling.

It is very generally recognized nowadays that a diet suited to a gouty patient is of no special value in such cases, and that our aim should rather be to give a generous diet in which the several main food factors are fairly represented, adapted to the special conditions of the case, such as the amount of febrile disturbance.

Drug-treatment has but little chance unless persisted in irrespective of immediate results; but it may be mentioned that in some cases aspirin proves very useful for the relief of pain and should be given a trial. But here is another condition: while the action of aspirin is conspicuous in some cases, in others apparently very similar this drug will prove quite useless. In view of the high opinion as to the value of guaiacol carbonate held by some, it should at least be given a trial, always remembering that the results claimed for it are to be looked for only if it be taken for long periods.

If a patient suffering from rheumatoid arthritis is seen early, we can very many times arrest—and I am bold enough to say, in some cases cure—the disease, provided the patient will carry out the orders strictly.

To Combat the Disease.—We can combat the disease by three methods, namely, first, treatment by diet; second, internal medication; third counterirritation. But these measures must be used in combination, as the omission of any one of them results in the patient's failing to make headway against the malady. On the other hand, if all three are steadily employed together, the result usually is quite gratifying.

First, the Dietetic Régimen.—The object aimed at here is, in brief, to provide a

diet which is easily digested and assimilated and not likely to cause any gastric or intestinal fermentation, but from which all red meats, including mutton and beef, are eliminated, as the latter undoubtedly do harm in rheumatoid arthritis. On the other hand, white meats and white fish are permissible, these being cooked by broiling, roasting, grilling or, in the case of fish, by brandering. No foods stewed in fats are permitted because of the difficulty offered by the fatty envelope to the gastric juice reaching the tissue to be digested. Further, since sugar, and particularly beet-sugar, very readily undergoes fermentation, and nowadays beet-sugar is pretty generally used by the public, this substance must be forbidden and its place taken by saccharin. For the same reason, potatoes, turnips, head of cauliflower, peas should be forbidden.

With regard to tea, a beverage which most patients do not like to dispense with, the ordinary method of infusion in boiling water is prejudicial because of the presence of free tannin, which is extracted in greater or less degree by the process. However, there is no objection to tea if it is treated with boiling milk, because the tannin then enters into an association with the albumen of the milk and forms a bland, nonastringent and innocuous combination. The tea is infused in the boiling milk for fifteen minutes and half a cupful of this infusion is poured out into the cup, which is then filled up with boiling water, saccharin being added if it is desired to sweeten the beverage. Coffee and cocoa may also be used when similarly prepared.

Well-boiled porridge is good, and with it milk and cream may be taken. Eggs lightly boiled, scrambled or poached may be taken by some patients without injurious effects, others find them unsuitable. Milk puddings prepared without sugar, clear soups, macaroni and milk soups are permissible.

Patients, on such a diet, do not necessarily become ill-nourished and thin. Indeed, they may even fatten. I have seen some who after using this diet for a time have discontinued it, getting worse when they resorted to eating any kind and all kinds of red meat.

Spirituos Beverages.—With regard to spirituous beverages, alcohol in moderate amount is neither beneficial nor the reverse in its influence on the course of the disease, but should it for any reason appear to be essential to the patient's well-being, whisky may be added to the dietary in small and accurately regulated amounts. Any kind of wine that agrees with the patient may be taken in small quantities, but perhaps a red wine, such as Burgundy, is the most suitable.

Woolen clothing should always be worn next to the skin, and exercise short of producing pain must be indulged in. A dry gravel soil and a warm dry climate are most suitable to patients suffering from rheumatoid arthritis.

The Use of Drugs.—The treatment of rheumatoid arthritis by drugs must be quite different from that of gout or rheumatism, and efficient measures must be taken to improve the general health of the patient. The drugs found most useful in combating this condition are guaiacol and potassium iodide.

Guaiacol Takes First Rank.—Guaiacol, if administered in sufficient quantities and for a sufficiently long time, is capable, in some cases, of arresting the disease, of diminishing the size of the joint, and permitting increased movement. It also relieves pain. It is useful both in subacute and in chronic forms of rheumatoid arthritis. This drug probably acts by arresting further infection from the intestinal tract and, after absorption, by combining with the bacterial toxins, and assisting in the removal of the hypertrophied fibrous tissues.

The most convenient form of administering guaiacol is in the form of the carbonate in cachets. This salt is a white powder which is free from the disagreeable odor, taste and irritating effects on the stomach of plain guaiacol itself. In the intestines it is slowly split up into guaiacol and carbon dioxide.

At first from 5 to 10 grains of the guaiacol carbonate should be given three times a day, the dose being increased by 1 or 2 grains each week until the dose reaches 15 to 20 grains. It is essential that this treatment be continued for at least twelve months.

The beneficial effects of the guaiacol are very much augmented by administering simultaneously a mixture containing potassium iodide, the depressing effect of the latter being counteracted by combining with it tonics, preferably the triple arsenates of iron, quinine and strychnine with nuclein.

As regards the dosage of potassium iodide, my experience is that patients usually tolerate full doses from the beginning, and under this course are much less liable to develop the distressing symptoms of iodism—especially if the drug be given in plenty of water—than if they are initially put on small dosage. My usual practice is to start them at once on 10-grain doses of the potassium iodide three times a day, and to continue this amount if it does not seem to disagree.

After the treatment with guaiacol carbonate and potassium iodide of a very large number of cases of rheumatoid arthritis, I am convinced that it is capable, in the large majority of cases, of retarding the progress of the disease and so of preventing the frightful suffering connected with movements of the affected joints—a condition so commonly following in cases of unrelieved rheumatoid arthritis.

If the treatment outlined is instituted in the comparatively early stages of the disease, then recovery with very little deformity may result; but even if after arrest of the process much deformity results, very considerable mobility of the joints may be promoted by baths, superheated air, massage, and passive movements. It is frequently remarkable, after a course of such treatment, how large a degree of mobility and capacity for usefulness has been restored to joints that were left in a severely deformed but quiescent condition.

The Value of Arsenic.—Arsenic and iron also are of great value when given in small doses for a period of three weeks out of every month. The action of arsenic, in the first place, is stimulant to gastric and intestinal digestion, whereby it increases the appetite. Secondly, it increases the activity of the tissues and, as a consequence, favors a better assimilation of the food ingested. Thirdly, it causes an increase of red marrow in the bone and so improves the condition of the blood.

I know of no better tonic to give along with the treatment above outlined than the triple arsenates of iron, quinine and strychnine with nuclein.

Physiologic Measures.—The thermal treatment of the affected joints, either by means of baths, superheated air or electric-light-baths, is most beneficial. Douche-massage with hot water is the most effective form of treatment, while perhaps next to that rank various baths.

Electric-light baths, in which the affected joints are bathed in the heat and light rays reflected from a number of incandescent electric lights, prove beneficial in many instances.

Properly regulated movements and correct massage are of great use in overcoming the stiffening and fixation of the joints and the muscular wasting in their vicinity. Massage increases the volume of blood circulating through the joint-tissues, whereby their nutrition is improved. It also exercises a stimulant effect upon the trophic nerves, and tends to reduce muscular spasm and to relieve pain, while the absorption of recently formed adhesions also, probably, is prompted by massage.

Massage, in addition to its local influence on the affected joints and their proximate muscles, improves the general circulation and nutrition of the entire body. General light massage should therefore be applied, little or no attention being paid to massage of the affected joints for the first few days.

The form of manipulation which may be applied to the joints, with the best results, is the application of quick frictions or rubbings to the surfaces of the joint. In addition, gentle kneading and squeezing of the parts, particularly of the tendons and fibrous surroundings, should be effected. The effects of such manipulations are generally evidenced by the rapid absorption of exudative products in and around the joints. Active and passive movements of the affected joints should also be employed.

Counterirritation.—This is most usefully carried out by the employment of blisters. Each large joint has applied to it a blister once in every seven or ten days. The size of the blister employed for the large joints is one inch square. Some blisters may be

applied to the smaller joints, or iodine may be painted on the skin in place of a blister, though the latter is certainly more efficacious. The counterirritant is applied at different areas all around the affected joints. One begins where the greatest pain and swelling exists and selects on each occasion an area of skin as yet unblistered. In this connection, it must be remembered that careful observation of the urine is necessary, the occurrence of albuminuria constituting a contraindication.

This counterirritant treatment has been pursued, in some cases, for two or three or more years, according to the extent and severity of the disease, and, it is believed, has tended to arrest the disease in many instances, as evidenced by disappearance of swelling, freedom from pain, regaining of power and locomotion and movement of the joints.

The diet should still be unaltered and the triple arsenates continued.

It is perhaps not necessary to state that one cannot hope to cause diminution in size or removal of the osseous outgrowth which occurs in the bone entering into the formation of the joints involved. Only the synovial increase and fluid infusions can be removed. But at the same time it is clear that no further osseous increase takes place so long as the patient follows out the details laid down for his relief.

Counterirritation of the spine also, in the form of linear blisters on both sides of the vertebra column, is of undoubted benefit in relieving the neuralgic pains so often associated with the disease, especially in the earlier stages. The blister should be applied to the cervical, dorsal or lumbar region, according to the distribution of the pain.

Intestinal Origin.—Into a discussion of the pathology of the disease it is not our purpose to enter, but I may be allowed, in closing, to remark that there is reason afforded by the widespread character of the disease for the surmise that some toxic influence is conveyed by the blood stream, and in view of the success which follows the line of treatment already outlined (and I might emphasize the necessity of intestinal antiseptics more, perhaps, than I have already done), one may perhaps not be wrong in

making the conjecture that the source of the toxicity may be referred to the alimentary canal.

Be the cause whatever it may, and however incurable many physicians think this disease to be, I feel justified in approaching cases of rheumatoid arthritis, not with a feeling of comparative helplessness, but on the contrary with the belief that in many of the cases a considerable amount of good can be done in the way of alleviating suffering, preventing deformity, restoring the use of the limbs, and in some cases affecting a cure by the means already outlined, in addition to the optimism and hope, encouragement, and belief in the final favorable outcome which the physician instills into his patient's mind.

GEORGE F. BUTLER.

Chicago, Ill.

RHEUMATOID ARTHRITIS: ETIOLOGY AND THERAPY

We like to think that our ideas and beliefs are formed from wide experience, extensive reading, and profound meditation. That would surely be fine, were it true. In point of fact, many of our beliefs are actually founded on, or at least deeply colored by, a solitary case or instance; some impressive one that made a deep and lasting mark on our sensorium.

Look to the Alimentary Canal.—Whenever rheumatoid arthritis is mentioned, two instances come to my mind. One was that of a man who sat in a chair, unable to move any muscle except those of one hand. He was a tavern-keeper and probably a good patron of his own bar.

The other was described by Professor Craig; two cases, his own and that of his wife, cured by rigid dieting, excluding acids and acid-formers from their food.

The fibrous tissues involved are irritated by something, and that something must be brought to them through the medium of the circulation—*ergo*, we look to the blood for the excitant of this interstitial inflammation.

Alcohol as an Etiologic Factor.—We are compelled to look to the alimentary canal for the great majority of the toxins that

appear and circulate in the blood. These may be derived directly from the food or from the decomposition of retained feces. In the case of rheumatoid arthritis it is probably the former to which the malady should be mainly attributed. This is evident from the connection between the disease and habits of alcoholism.

We now know that when alcohol is taken into the stomach, the poison is carried through the portal vein to the liver, which at once is aroused to activity in the effort to eliminate the dangerous substance. So engrossed is the liver in this duty that the toxic elements of the ordinary food that would otherwise be eliminated by this great intercepting apparatus are suffered to slip by and enter the circulation. These then are finally excreted by the kidneys and thus account for the increase of nitrogenous matter appearing in the urine after partaking of alcohol. But before being thus cast out they have circulated throughout the body and exercised their deleterious powers on the tissues and cells most prone to injury from them. In this case it is the fibrous tissues about the joints that are most seriously affected by these particular forms of toxin, and the result we see in rheumatoid arthritis.

Barkeepers are usually sluggish as to physical exercise, keeping late hours, and taking little care of their bowels or their general health. They get fat and plethoric, using by preference nitrogenous foods in larger quantities and proportions than working men do. Their breath usually is fetid, their skins are sodden or puffy, eyes bleary—not altogether from the alcohol they consume, but from the unhealthy habits of their lives as well.

Similar habits may well arouse the malady in persons not especially given to alcohol, but when present in addition, that agent is a powerful causal influence.

The liver of such people may be disabled by overloads of food, of condiments, or of drugs; for some cases of this malady are met with in opium habitués. Ordinary food with sedentary habits may account for arthritis when the same diet with sufficient exercise to utilize it might have proved harmless. Exposure to raw winds and

foggy climates may arouse or keep up the disease. For such, the climate should be sheltered and equable, the protection against cold and damp perfect. Even dry winds are injurious when they blow continually, as in islands in the trade-wind latitudes, or those constantly blowing across the deserts of South Africa where the wind is absolutely dry but arthritic maladies are excessively prevalent.

Therapy in a Nutshell.—Clear the bowels completely and disinfect them by the use of sodium sulphocarbolate; then keep them clear and disinfected.

Limit the diet to the lowest point compatible with nutrition, and this may mean the Mitchell diet of half a glass of thoroughly skimmed milk every four hours. Nobody appreciates how little food is really necessary until he tries to see how little he can get along with, if it is eaten properly.

Exclude absolutely alcohol, meats, beans, peas, the caffeine beverages, tobacco, all condiments, and foods that contain a volatile oil or an acid, such as cresses, tomatoes, fruits.

Let the cereals be taken only in forms that require prolonged mastication, such as dry toast, zwieback, scones, popped corn, whole wheat cooked like oatmeal; nut kernels, dried fruits eaten raw and completely masticated.

Exclude all foods that disagree with the particular patient, causing acidity, fermentation or an increase of arthritis.

Use such remedies as may be indicated by the symptoms in each case.

Calcalith is a good one in many instances. Do not continue any form of lime too long or too steadily.

Calcidin should be effective in loosening and carrying away the debris about the joints.

Colchicine and veratrine are of value in stimulating the eliminants, and it is instructive to see how the strength revives, the appetite improves, and the general health is enhanced under these "sedatives." Clear out the cinders and the furnace burns better.

Passive exercises, massage, must precede the active forms until the patient is enough better to essay the latter. Do not be too aggressive in this matter.

Patience is to be inculcated, for the treatment will at the best require months, and any transgression of the regimen may be expected to set the case back distressingly. But the resources of modern therapeutics are such as well to justify a very favorable prognosis in this malady.

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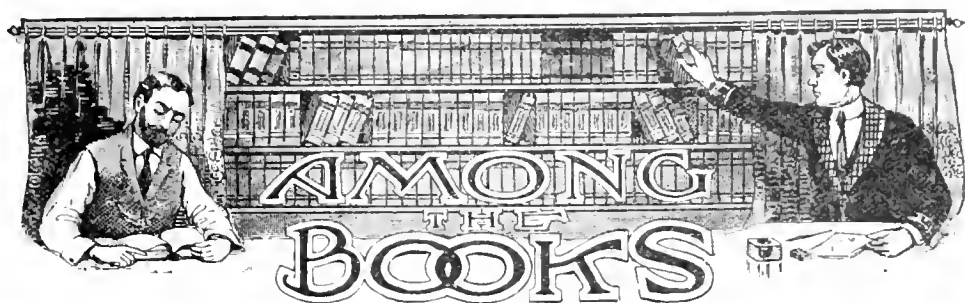
COMMENT ON THE LESSON

The space devoted to the Post-Graduate Course, this month, is again rather small. Next month we expect to be more generous with our space and enter into a much fuller discussion of the topic then to be taken up, i. e., rickets.

We particularly want to ask every reader of *CLINICAL MEDICINE* who has had experience with rickets to write us very briefly a description of the methods, dietetic, hygienic and medicinal, which he has found most effective. This is a very interesting subject, one that has not recently been much discussed, and we shall all benefit by a free interchange of ideas. This invitation is to every reader of *CLINICAL MEDICINE*, whether he is taking the Course or not. Please help us.

EXAMINATION QUESTIONS

1. What are the dominant theories regarding the causation of rheumatoid arthritis.
2. Describe the characteristic appearance of a knee and a hand crippled with this disease.
3. What are Heberden's nodes? Explain the muscular atrophy characteristic of the disease.
4. What three methods are useful in combating the disease?
5. Outline a diet for one of these patients. Would you advise high or low protein diet?
6. What remedies, in their proper order, are most useful in treating rheumatoid arthritis?
7. What form of counterirritation do you find most valuable?
8. What part does the alimentary canal play in the etiology of the disease, in your opinion? Alcohol?
9. Describe a case occurring within your own experience, and outline a treatment.



BOOKS ON NURSING

"A Manual of Nursing." By Margaret Frances Donahoe, Principal of Training School, Philadelphia General Hospital. New York: D. Appleton & Co. Illustrated. 1910. Price \$2.00.

This is a textbook for the use of pupil nurses while in training, and is remarkably complete in the scope of the subjects treated. It affords information to the intending nurse on what is expected from her, and describes clearly and in simple language the various duties devolving upon the nurse in the management of various diseases and conditions in the hospital. Special chapters are devoted to the discussion of food, the administration of medicines, enemata, douches, as also to the preparation of patients for operation and their aftercare. There are also some chapters on nursing in special diseases and on the care of infants and young children.

"Practical Nursing for Male Nurses in the R. A. M. C. and Other Forces." By Major E. M. Hassard, R. A. M. C., and A. R. Hassard. New York: Oxford Medical Publications. 1910. Price \$1.50.

Although primarily intended for male nurses, and, perhaps, more particularly for military nurses, this little book also affords an enormous amount (considering its small size of only 340 pages) of excellent information and advice for anyone having to do with the care of invalids. It treats at length with such homely and often neglected matters as bedmaking, washing of patients, their observation, local application of heat and cold, the prevention and care of bed-sores, etc. It goes without saying that the subject of food, the administration of medicine, etc.,

are also considered. The text is simple and to the point, and a careful study of the little book will assist many who need information on the subject.

KERR'S "CARE OF CHILDREN"

The Care and Training of Children. By LeGrand Kerr, M. D. New York: Funk & Wagnalls Company. 8 vo. pp. 233. 1910. Price 75 cents.

An interesting little guide for parents, the purpose and scope of which is indicated in the title. The author is too well-known to require an introduction to our readers, and his name is a sufficient warranty for the usefulness of his work.

CLARKE'S "VITAL ECONOMY"

Vital Economy, or How to Preserve Your Strength. By John H. Clarke, M. D. London and New York: A. Wessels. 1909. Price 50 cents.

When the Bookworm first glanced through the headings of this little volume, he was astounded at reading such assertions as, "bathing not essential to cleanliness," "fresh air not a remedy for all," and similar phrases, and he was largely, through such captions, led to read the entire book with care—and, he acknowledges gratefully, with benefit.

The author is by no means a crank who would defend the dirty habits of the great unwashed; he much rather is an eminently sane physician and observer who is not afraid to speak against the accepted fads of the day and to expose their fallacies. His remarks concerning the daily bath, the fresh-air craze, the exercise-mania, the

tippling of alcoholics as well as of tea and its congeners, etc., are not only sensible and just, but are worthy of our attention and acceptance.

We are indebted to Dr. Clarke for a pleasant hour and for much valuable advice which the Bookworm, for one, shall not neglect to profit from. The book is written in a chatty, albeit convincing style which makes it excellent reading for a leisure hour and yet supplies ample food for thought.

GOUGET'S "ARTERIOSCLEROSE"

L'Arteriosclerose et Son Traitement. Par A. Gouget, Professeur Agrégé à la Faculté de Médecine de Paris: Médecin des Hôpitaux. Paris: J. B. Baillière et Fils. 1907. Price 2.50 francs (75 cents).

This excellent little treatise on the important subject of arteriosclerosis and its prevention and treatment was written by one of the foremost physicians of the Paris hospitals of today. Those of our readers who understand French will find in it many valuable ideas and suggestions.

PAMMEL'S "POISONOUS PLANTS"

A Manual of Poisonous Plants, Chiefly of Eastern North America, with Brief Notes on Economic and Medicinal Plants, and Numerous Illustrations. By L. H. Pammel, Ph. D. The Torch Press, Cedar Rapids, Iowa. 1910. Price \$2.50.

We are glad to announce this interesting and important work on poisonous plants by a recognized authority in botany. It was of particular interest to the reviewer to find discussed, not only the usual poisonous plants, but also such small forms of vegetable life as the schizomycetes and others of the kind.

The author introduces his work by an interesting historical review on the use of poisons, and discusses the harmful effects traceable to vegetable substance in the broadest interpretation of the subject, having included all plants that are injurious, although many of these are not known to produce poisons, some even being more useful economic plants and yet injurious to some people.

It must be admitted that this interpretation of the author enlarges the scope and the interest of his book materially, and renders it more immediately useful to the physician and especially to one who employs the alkaloids and other active substances derived from plants.

"SOME POSOLOGICAL HINTS AND OTHER USEFUL INFORMATION"

This is a little pamphlet of twenty-four pages in all, issued by the Fellows Company. It contains a digest of hints on the absorption and elimination of the most-used drugs, a list of diuretics, cathartics, anthelmintics and antiemetics, tables of the overdose-symptoms of drugs, and a diet table for tuberculous patients. Although there are plenty of mistakes, it contains a mass of useful information which could hardly be found elsewhere in the same bulk.

Among the mistakes we might instance one that states that atropine begins to act in thirty minutes, while belladonna begins to act in twenty minutes. Since belladonna acts through its atropine and it requires time for the stomach to dissolve out the active principle from the encumbering debris of the crude preparation, these figures should be reversed. But in spite of this and some other errors, this pamphlet is so full of useful hints not readily obtained from the textbooks that it is well worth sending for and retaining for reference.

"REMEDIA HOECHST"

Remedia "Hoechst," Pharmazeutische Produkte, Serotherapeutische und Bakterien-Praeparate der Farbwerke vorm. Meister, Lucius & Bruening. Hoechst a. M. 1910.

This excellent octavo volume, containing 778 pages of text, gives a collective review of all preparations made by the well-known firm of Meister, Lucius & Bruening in Hoechst a. M., which firm is the principal purveyor in Germany of serotherapeutic preparations and of bacterins. The firm has, however, also made a great many of the more recent pharmaceutical products and enjoys a reputation equal to that of Merck in Darmstadt.

The volume before us, which has kindly been sent to the reviewer, contains a wealth of literature from the medical periodicals of all countries since the year 1900, reporting the experiences with the newer remedies of physicians in private practice as well as in dispensaries and hospitals. The book is in German, and so far as we know, the agents of the Farbwerke, for the United States, Victor Koechl & Co., New York, are in a position to supply copies to those interested.

"THE INTERNATIONAL CLINICS"

International Clinics, Vol. IV, Twentieth Series, 1910. Philadelphia: J. B. Lippincott Company. Price \$2.00.

The present volume of the "International Clinics" presents a review by Dr. Henry W. Cattell on Ehrlich's new preparation, arsenobenzol, besides such other important papers as on syphilis, tuberculosis, and on diverse subjects which are at present generally discussed. To the owners of this excellent series, we do not need to recommend it. Non-owners we can cordially advise to subscribe for this work, which offers quarterly representative papers upon the progress in all the various disciplines of medical sciences.

ROBINSON'S "NEVER TOLD TALES"

Two years ago we referred editorially to Dr. Wm. J. Robinson's "Never-Told Tales," which had then just appeared. A few weeks ago we received copies of the third edition. It is evident that the book has found many eager readers. It is right that this should be so, for it enters into certain phases of life which are usually talked about (if at all) with bated breath, since they are taboo "in good society." And yet the subject of all these tales, the penalty that is being paid through sexual ignorance, is one of very first importance to our race. What this ignorance means can no more forcibly be told than by quoting from the "Foreword" of Dr. Robinson's book. He says:

"The writer has seen young blooming girls converted into pitiful barren wrecks within a few months after marriage; he has seen households made desolate and children

orphaned by the mother being carried off to a premature grave; he has seen young mothers reduced within a few years to a condition of worn-out hags, by incessant child-bearing; he has seen children born into the world, puny and crippled, blind and noseless; he has seen many terrible things, which cannot even be mentioned here, all brought about *not* by the wickedness, but by the ignorance, of the men and women entering the marriage relations; all of which could have been prevented, if the tales I am telling now had been told before."

From this it appears that this book has a very definite purpose, that is, to bring home with the utmost power the devastation that has been and is being wrought by ignorance of the diseases and disasters peculiar to the sex relation. The stories are real stories, telling of people whom we physicians all know. Who of us could not duplicate the "Story of Rose and Edward," the young woman infected with gonorrheal salpingitis on the marriage bed, compelled to undergo an unsexing operation? Or of Lydia Swinton, the innocent girl who is led astray and ruined by a conscienceless polished scoundrel? Of Betty and Bob, the childless couple, longing for children, the man blaming the woman for *his* unsuspected sterility, with domestic unhappiness, ending in the divorce courts? Of Brannigan, the syphilitic, marrying in spite of the doctor's warning, and of the heritage of disease which followed?

We all know of these things, but do our patients, the men and women who look to us for medical advice? Too often they do not, and for these, the people who must suffer through ignorance, this book has its special message, and peculiar mission. It is a book which every physician should read and own, and which he may well place in the hands of the many who need it—the young men (yes, and the young women) entering the sex life, about to be married, and their fathers and mothers.

In the first review that appeared in these pages we called it a terrible book. It is terrible in its revelations, but it will save from just such horrors as those depicted, if it is read. And so it may become a book preservative.

The two final essays in the book, "A Wonderful Country," and "A Page from the Life of Professor Beaumont," are of a different character from the earlier chapters. They give us a glimpse of the really optimistic side of Dr. Robinson's character.

LORAND'S "OLD AGE DEFERRED"

Old Age Deferred. The causes of old age and its postponement by hygienic and therapeutic measures. By Arnold Lorand, M. D. Translated, with additions, by the author, from the second German edition. Philadelphia: F. A. Davis Company. 1910. Price, \$2.50.

The art of living long has ever formed an attractive subject of study for thinkers after they had passed the meridian of life. From Cicero's "De Senectute" to Bacon and Temple, from Cornaro's "La Vita Sobria" to Hufeland's "Longevity," and down to the present day, the treatises and monographs written on the subject are many and varied.

It is easily understood that with the researches and discoveries of recent years in biology and biochemistry our ideas concerning the causes of growing old should have undergone rather marked transformation, of particular importance in this, as in many other respects, having been the studies of Sajous on the internal secretions, which introduced many new conceptions and discoveries, and which now engage the attention of students the world over.

Dr. Lorand, the author of the volume before us, bases his theories concerning old age largely on the results of Sajous' investigations. Old age, to him, is a chronic disease due to degeneration of the glands yielding internal secretions, the thyroid, the sexual, and the adrenal glands in particular, but including also the liver and the kidneys; this pathologic condition being characterized by the abundant growth of connective tissue, diminution of the oxidation processes, and a concomitant condition of auto-intoxication.

The arguments by which the author vindicates his position are interestingly presented, and a careful study of the book opens up a broad vista of new ideas. Of

particular interest are Lorand's views on the importance of heredity and its influence upon the vital processes. According to him, we might go even further than did Oliver Wendell Holmes when he said that the education of a boy should begin a hundred years before he is born.

It would serve no useful purpose to enter more particularly into any one of the many subjects discussed so interestingly by the author. The book is an important one and should be studied by every physician. We recommend it warmly to our readers.

"SYMPOSIUM ON PNEUMONIA"

Pneumonia: A Symposium on the Occurrence, Etiology, Diagnosis, Prognosis, and Treatment of Pneumonia. Reprinted from *American Medicine*. Arranged and edited by H. Edwin Lewis, M. D., New York: American Medical Publishing Company: 1910.

This timely little volume presents the views of some of our most noted clinicians upon this dreaded disease, pneumonia, a disease which, but a very few years ago, was claimed to be not amenable to active treatment. It is interesting to note that the attitude of these men in regard to this disease is decidedly hopeful and we are convinced that much can be accomplished by positive and energetic therapy. The book is well worth reading.

CULLENS' "SERPENT'S TRAIL"

The Serpent's Trail, or Memoirs of Harold Bagote, Physician, A Tale of the South and of Cuba. By F. B. Cullens, Broadway Publishing Company, New York, 1909.

This is a tale of the South and of Cuba, beginning in the times of the civil war, and finding its denouement during the endeavors of the Cuban junta to secure American intervention in the long continued quarrel between Spain and her last Western possession. The story is interesting and attracts us because it is written by a physician. It is interestingly written, but its enjoyment is greatly marred by the many typographical errors. Never-

theless, the Bookworm spent a pleasant hour following the fate of Harold Bagote, Physician.

TWO POPULAR BOOKS ON HYGIENE

"Principles of Public Health." By Thos. D. Tuttle, B. S., M. D., Yonkers-on-Hudson, N. Y. World Book Company. 1910. Price 60 cents by mail.

A simple textbook on hygiene, presenting the principles fundamental to the conservation of individual and community health.

"Primer of Hygiene." By John W. Ritchie, and J. S. Caldwell. Illustrated. Yonkers-on-Hudson, N. Y. World Book Company. 1910. Price 48 cents by mail.

The purpose of this book, says the author, is to teach the lower-grade pupil what he himself can do to keep his body in health—personal hygiene.

TOUSEY'S MEDICAL ELECTRICITY

Medical Electricity and Roentgen Rays. By Sinclair Tousey, A. M., M. D., Consulting Surgeon to St. Bartholomew's Clinic, New York City. Octavo of 1116 pages, with 750 illustrations, 16 in colors. Philadelphia and London: W. B. Saunders Company. 1910. Price, cloth, \$7.00 net; half morocco, \$8.50 net.

This is an imposing volume on electrotherapy, in fact, it is the most complete single-volume work on the subject this reviewer has seen.

The author introduces an innovation by considering static electricity before he takes up galvanism and faradism, which has the advantage of rendering that branch much more easily comprehended, and avoids the confusion in the mind of the student frequently resulting from the older method of presentation. The diagrams and explanations are clear and comprehensive. Under this head the point is brought out that the illumination of a vacuum-tube by a static machine is not the result of a high-frequency current, but requires an additional appliance. The method of producing high-frequency currents both with static machine and coil is also fully described.

The chapters on galvanism, faradism, electrodiagnosis, and electropathology are complete and up to date. These branches are like mathematics in that they do not admit of great variation in the mode of presentation, but Dr. Tousey shows that he is thoroughly versed in the subject-matter and capable of explaining it clearly to his readers.

Dynamic electricity and the x-ray are exhaustively considered and a chapter on radium completes the volume.

This book is a work of merit and will occupy a permanent place in medical literature.

NOBLE M. EBERHART.

KEMP'S "DISEASES OF STOMACH AND INTESTINES"

Diseases of the Stomach and Intestines. By Robert Coleman Kemp, M. D. Octavo, 766 pages, with 270 illustrations. Philadelphia and London: W. B. Saunders Company. 1910. Price, cloth, \$6.00 net.

This is a very practical and readable guide for the treatment of diseases of the digestive canal, which evidently presents the results of personal experience and investigation. The methods of observation, examination and treatment are not only clearly described, but also well illustrated, which will prove of considerable assistance in many instances.

The reviewer was interested in noting that the author evidently agrees with Chittenden's low-proteid standard in the dietary requirements, both in health and in disease.

The description of digestive disturbances and their causes and of the whole domain of diseases of the digestive apparatus is clear and lucid, the treatment is conservative, and the indications for surgical intervention are well presented.

WELLS'S "COMPEND OF GYNECOLOGY"

Compend of Gynecology. By W. H. Wells, M. D., Fourth Edition. Philadelphia: P. Blakiston's Son & Company. 12mo., 290 pages, with 153 illustrations. 1911. Price, cloth, \$1.00.

Compendis are a necessity in these days when the man who presents himself before

an examining board must know so many things. The writers of these manuals seem to have studied and mastered the art of including the most essential points in small space, and this is especially evident in the book before us. In this we note a vast improvement over the earlier compends. The illustrations are very good, though we doubt if many microscopists are so fortunate as to have the spindle-cells of sarcoma as definitely outlined as they appear on page 234.

SALEEBY'S "RACE CULTURE"

Parenthood and Race Culture. An Outline of Eugenics. By Caleb Williams Saleeby, M. D., Ch. B. New York: Moffat, Yard & Co.

This work is based on the trite semitruisms which mar most of the platitudinous modern discussions on heredity. The fundamental idea is a nickel-in-the-slot initial velocity whereby the spermatozoon emerges as a completed being.

This homunculus-notion on which Sterne lays such stress in *Tristram Shandy*, was exploded nearly three-quarters of a century ago by the embryologic discoveries of Von Baer. The fact that the ovum plays the chief part in embryogeny, and that it is chiefly a product of maternal environment, is totally ignored.

The influence of the struggle for existence between the developing organs, as shown by Roux over twenty-five years ago, receives no attention. The evolution by atrophy, which DeMoor has demonstrated, and the resultant periods of stress, such as simian or senile periods of embryogenic arrest—and which plays such a part in precocity and allied premature senilities—have not come within Dr. Saleeby's ken. The fact that this is the result of a struggle between the male and female types, of which the female is the higher, since it determines position in the scale of life, is seemingly unknown to the author.

Prenatal environment is largely ignored in the book. Heredity is erroneously regarded as a destiny which *must* be, rather than, as Kiernan has truly said, as a prophecy which *may* be. This fatalistic notion marks

the book, since maternal environment before birth and child environment after birth lie behind most alleged effects of heredity.

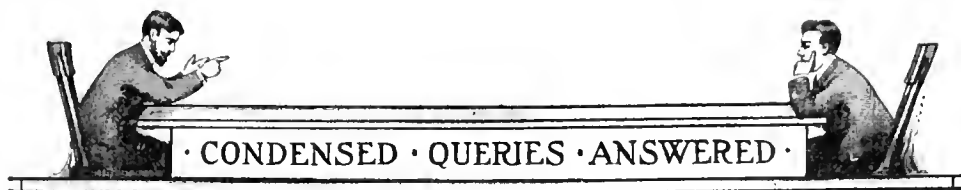
Dr. Saleeby's motive is to be commended. He is evidently sincere and honest in his convictions. Books of this character, if based on correct premises, are valuable, for "there is," as Saleeby says, "no greater need for society today than to recognize that education must include, *must culminate in*, preparation for the supreme duty of parenthood.

" * * * * The boy and girl must learn that the racial instinct exists for the highest of ends—the continuance and ultimate elevation of the life of mankind. It is a sacred trust for the life of this world to come. We must teach our boys what it is to be really 'manly'—the fine word used by the tempter of youth when he means 'beast-ly.' To be manly, is to be master of this instinct. And the 'higher education' of our girls, as we must teach ourselves, will be lower, not higher, if it does not serve and conserve the future mother, both by teaching her how to care for and guard her body, which is the temple of life to come, and how afterward to be a right educator of her children. The leading idea upon which one would insist is that the key to any of the right and useful methods of eugenic education is to be found in the conception of the racial instinct as existing for parenthood and to be guarded, revered, educated for that supreme end."

To the student of eugenics the volume will be found interesting, although, possibly, not always convincing. It is to be hoped that this book will stimulate study along these lines, which have been so persistently neglected. It certainly ought to fill up, in some measure, the immense void of ignorance prevailing among the laity regarding these matters, and, more's the pity, among many in the profession.

Altogether Dr. Saleeby is to be commended for his telling style, his plain but elegant diction, and the enterprise he has displayed in quoting from innumerable writers on eugenics and allied subjects. The volume can hardly fail to be a unique and interesting accession to the doctor's library.

GEO. F. BUTLER.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

ANSWERS TO QUERIES

ANSWER TO QUERY 5605.—“Nocturnal Emissions Treated with Styptol.” A reader of CLINICAL MEDICINE sends us the following translation from the *Wiener klin. Woch.*, 1909, No. 37: “Jos. Koenig, district physician in Karlsbad, refers to the reports of the Congress of Internal Medicine of 1904, in which he published his results with hydrastis, which can control the pathological and excessive seminal discharge better than any other remedy commonly in use. Others have come to the same conclusions independently.

“The discharges will diminish in frequency, no matter whether they occurred almost every night or even several times a night, to about once a week, if 40 to 60 drops of the extract are taken before retiring.

“Within the last year the author has tried styptol, the phthalate of cotarnine, arguing that drugs which will contract the vessels of the uterus will show an analogous action upon the utriculus masculinus and the excretory ducts of the seminal vesicle.

“He was not disappointed in his expectations. No matter how frequent the nightly losses were, the intervals could be lengthened to from one to three weeks. At the same time there was a distinct lowering of the sexual hyperexcitability, where present.

“He administers first two, later three, styptol tablets, 3-4 grain each, shortly before retiring, for a month, to be repeated at longer intervals if necessary.”

ANSWER TO QUERY 5686.—“Chorea”. You will receive many letters from your query to the CLINIC readers. I wish to

state that there is nothing in the category of medicine that will tax anyone's nerves so much as to be called upon to treat a case of genuine chorea. In my personal experience I have had fifteen cases to contend with, six of which were very severe.

Above all things, there is one absolute measure that must be carried out to the letter, and that is absolute control of the patient: he must be kept quiet and at rest.

When this has been accomplished, clean out, clean up and keep clean. Then give 1 grain of antipyrin for every year of the patient's age, increasing by 1 grain each day to every dose until all twitchings have stopped. Start with Fowler's solution with the beginning of the antipyrin and give to the point of tolerance. At one time I gave a boy of eight years 14 grains of antipyrin twice daily. In a case I now have under treatment (a girl of thirteen), I gave 28 drops of U. S. P. Fowler's solution four times daily before she manifested the least sign of having taken arsenic at all.

If you think 15 or 20 grains of antipyrin too large a single dose, give half of it at 8 p. m. and the other half at 9 p. m. directing your patient to retire immediately after the first powder has been taken. This will insure a good night's rest. It may be necessary to give two or three doses of antipyrin per day to control twitching. When twitching stops, stop the antipyrin, but continue with Fowler's solution, giving it for ten days or two weeks after the twitching has ceased, after which it should be decreased a drop per dose for each day. At the same time give syrup iodide of iron, this to be continued for many weeks after.

Try antipyrin at night for only ten days, increasing the dose 1 grain daily, using Fowler's solution also. If twitchings are not diminished, use two (full) doses of antipyrin daily, besides insuring quietness and rest. Then let me hear from you six weeks from the time you have properly put this treatment into effect.

What I have written above has also been practised in one of my first cases with this trouble. I recall an article I read to that effect some years prior, and since then I have treated fifteen cases with good results; and have never had a recurring case.

Be sure that growths or other lesions are not the cause, and, as someone has well

said, "be sure you are right, then go ahead."

JAMES M. TISCHE.

Wood Lake, Neb.

—
ANSWER TO QUERY 5690.—Referring to Query 5690 in your April issue, allow me to state that there has been considerable discussion in German papers in regard to "carottensuppe" (decoction of carrots) as a splendid infant food in certain bowel diseases. You will find the articles either in the *Deutsche Medizinische Wochenschrift* or *Muenchener Medizinische Wochenschrift* of 1910.

FERDINAND HERB.

Chicago, Ill.

QUERIES

QUERY 5695.—"Erythema Urticans?" J. A. W., Indiana, is treating a young man, age 22, farmer, with good family history, who never has been sick, except with measles several years ago. Habits are good; no alcohol or tobacco are used. Urine is normal; bowels are regular; tongue is clean; in fact, nothing wrong can be discovered. But since October 1, last, he has, on violent exercise (such as running, sawing wood, throwing hay from mow, etc.) had a rash, very red, which itches intensely, almost making him frantic. This never comes on except after exertion. When not working or on moderate exercise he does not experience this trouble. Heat or cold is without effect. The skin looks perfectly normal as soon as he cools off. He has been given nerve sedatives, alkalis, eliminants, etc., but without benefit.

Erythema fugax is almost always of obscure origin and most capricious in its appearance and course. It is not always easy to distinguish between an erythema hyperæmicum and a mild urticaria, i. e., erythema urticans. Pruritus is a feature in the latter disorder, and we are inclined to diagnose your case as such.

The rash may be localized or general, or general today and more or less localized tomorrow. There may be slight elevation of the erythematous areas or merely a

"blush." It is, of course, absolutely essential that the cause be discovered and removed. In nine cases out of ten an auto-toxemia exists (retention of urea or absorption of products of intestinal fermentation); still, now and again, the underlying disorder cannot be identified.

A course of eliminants, together with the arsenates and digestants (papayotin and diastase), usually meets the requirements. It is also desirable to have the skin kept active with epsom-salt sponge-baths followed by friction with a rough towel. Now and again pilocarpine in "small repeated doses to effect" proves promptly curative. It might be well to have a blood-smear examined. Have you tested the urine for indican? What is the output of urea and of solids? Any signs of anemia? Look up the underwear worn. Some dyes are extremely irritant, especially the scarlet.

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QUERY 5696.—"Ragged-cup (Silphium Perfoliatum) in Splenic Diseases." J. R., Indiana, is studying the drug called Indian cup-plant, also sometimes called "ragged cup." It is, our correspondent assures us, almost a specific for any kind of splenic trouble."

There are thirteen species of silphium, or "rosin-weed", in the United States. The common rosin-weed, silphium laciniatum,

is found from Ohio to Alabama, west from Texas to South Dakota. Common names are pilot-weed and polar-plant. *Silphium perfoliatum*—cup plant, Indian cup, ragged-cup—is found in Ontario and in eastern United States, west to Nebraska. Another variety of *silphium*, known as prairie dock, prairie-burdock, rosin-plant, has the same properties as the *laciniatum*, the herb containing a resinous substance of aromatic order.

It is well to bear in mind that *sarracenia purpurea*—the pitcher-plant, fly trap, hunters-cup, Indian-pitcher, skunk-cabbage, etc.—is also known as "Indian-cup." Other popular names for this plant are whippoor-wil boots, smallpox-plant, dumb-watches, Eve's-cup, etc. This plant is tonic, anodyne and astringent.

Berberine acts directly upon the spleen, and it may be well to bear in mind this fact. We should be pleased to hear from any doctor familiar with *silphium perfoliatum* or its action.

—
 QUERY 5097.—"Postpartum Hemorrhage." H. F. C., Massachusetts, desires to know whether the calcium salts would prove beneficial to a patient "who seems in fine condition every way, except that she has pain through her ovaries constantly, but is relieved as long as she takes the uterine tonic I give her. (Composition: Metrin, gr. 1-2; bryonin, gr. 1-500; caulophyllin, macrotin, helenin, each gr. 1-6, amorphous hyoscyamine, gr. 1-500.) She has had eight children, and is about five months pregnant again. She is afraid because she has such terrible bleeding after each confinement. Her monthly periods are normal except for pain."

The patient's blood should be examined, and we advise you to see if there are any polypi, or perhaps a lacerated cervix. You might advantageously give calcium chloride, provided there is a blood dyscrasia. You could not, of course, expect any benefit from such medication if a local lesion is the cause of the hemorrhage.

If you have delivered her before, describe the character of the hemorrhage. When does it come on? Is there difficulty in securing contraction of the uterus? We should

be inclined to give caulophyllin and viburnin three times a day, for a month or six weeks prior to parturition, with 2 drams castor oil each night on retiring, for fourteen or fifteen days prior to the expected confinement.

Hydrastinine will probably control the hemorrhage if it occurs. It is well to give a good dose of atropine first, say, as soon as the child is born, then hydrastinine to maintain effect. Probably you have not used atropine, at the right time, in the right way, to secure results. Bear in mind the action of the drug and you will realize how speedily it reduces localized congestion. The *cause* of the bleeding must always be recognized and appropriate remedies given.

—
 QUERY 5098.—"Chloasma." J. W. H., Texas, reports a case now under his observation and asks for diagnosis and treatment. Male, age about thirty, some months ago noticed a discoloration or pigmentation of the skin between the foot and knee of one limb. The discoloration was almost solid over the area affected, but faded off into spots at the edges; the pigmentation has gradually been spreading until now it covers most of the lower limbs, which are dark brown in color. There is no pain, soreness, itching or irritation at all; in fact patient says he would not know anything was wrong if he did not see it. His health is seemingly perfect.

It would seem that the patient has chloasma. In this disease the only alteration of the skin is in its color. A deposit of pigment occurs in the rete mucosa and as a result circumscribed or diffused patches of yellowish to black discoloration make their appearance. When the patches are black the disorder is called *malasma* or *melanoderma*. Such primary pigmentation occurs in Addison's disease, tubercular leprosy, abdominal tuberculosis, cirrhosis of the liver, gastric cancer, malaria, diabetes, exophthalmic goiter, etc. The ingestion of arsenic may set up a chloasma. Occasionally hyperpigmentation follows exposure (of usually covered portions) of the body to the sun, but it is hardly likely that a dignified school principal has been exposing his extremities in that way.

In pityriasis versicolor or mycosia microsporina (sometimes confused with chloasma) we have a vegetable parasitic disease, characterized by the appearance of brown, variously shaped and sized patches, usually upon the trunk.

The patches at first are circular, but as they grow larger they lose definite contour though occasionally the edges are raised. It is very unusual for the arms and legs to be affected unless the chest has been primarily infected. The only subjective symptom is itching and this is frequently absent.

The treatment of chloasma proper is very unsatisfactory. Applications of peroxide of hydrogen cause a temporary disappearance of the pigmentation. Pure carbolic acid applied with a swab sometimes proves effective. The skin turns white and in a few days dead epidermis peels off.

Bichloride of mercury in two-percent solution may be applied repeatedly until vesication is secured; the vesicles being removed the raw surface is dusted with borated talcum or other drying powder. In pityriasis versicolor there is more or less scaliness and the presence of microsporon furfur settles the diagnosis. The best treatment for the latter condition is to have the patient scrub the skin thoroughly with green soap and water, then apply twice a day saturated solution of sodium hyposulphite; diluted sulphurous acid is also a prompt remedy. We would urge upon you, however, the necessity of making a very thorough examination of the individual and his secretions.

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 QUERY 5690.—“Morphine in the Acute Stage of Pneumonia.”—D. B. J., South Carolina, ventures the suggestion that, in the treatment of an acute form of pneumonia where there is pain in the side as well as high temperature, the triad of aconitine, digitalin and strychnine, supplemented by a hypodermic of morphine to relieve the pain and the cough and to make the patient rest, makes the treatment complete. He adds: “My opinion is that the sulphocarbolates for intestinal antiseptics are overestimated in your practice. Laxative salines are proper with special provisions to nourish and sustain the patient, but the sulphocar-

bolates are irritant and interfere with digestion and assimilation.”

We cannot endorse your suggestion, Doctor, that morphine should be given with the “trinity” in the acute stage of pneumonia. Opiates, as a matter of fact, are rarely, if ever, indicated in this condition and never in conjunction with aconitine. The basal treatment outlined by us so many times proves efficacious in ninety-eight cases out of one hundred, and the patient is usually convalescent when individuals treated along old-fashioned lines are just reaching the crisis.

We cannot agree with you either that the sulphocarbolates are “overestimated.” On the contrary, we are more and more convinced (and our opinion is shared by thousands of physicians throughout the country) that the efficacy of the intestinal antiseptic *can not* be overestimated, and there is hardly a disease in which its intelligent exhibition would not prove beneficial. It is essential, of course, in every case, to eliminate thoroughly when exhibiting intestinal antiseptics. There is no use trying to disinfect the Augean stables until the accumulation of offensive material is removed.

If you have never experimented in this direction, doctor, give a few doses of calomel, podophyllin and bilein, followed by a morning saline laxative and 2 to 5 grains of intestinal antiseptic with 4 ounces of water every three hours, to your next patient presenting a high temperature and other evidence of toxemia. You will be pleased at the result, and you will find that a very few doses of the “trinity” or other indicated antipyretic will then suffice to keep the temperature below the 100-mark.

Of course, there are conditions in which it is necessary to select the indicated sulphocarbolate. Sodium sulphocarbolate in extreme acidity; the zinc salt in relaxed conditions with profuse serous discharges; calcium sulphocarbolate toward the end of exhausting diseases or where lime is deficient, etc.

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 QUERY 5700.—“Definite Diagnosis Desired.” V. M. G., Michigan, presents the following clinical data and asks for confirmation of his diagnosis in the case

of a boy two years old; family history negative; personal history showing no previous illness except a susceptibility to "colds." He writes:

"On January 5 I was called and found the child very hoarse and breathing hard. I made a thorough examination and found temperature, pulse, heart, and urine normal; lungs all right; inspiration easy, but expiration, 20 per minute, difficult; pharynx normal. Patient ate well, slept well, and appeared to have no pain, but at times could not breathe lying down and would choke on awakening from sleep. This condition passed away very soon.

"I ordered a thorough cleaning out of the intestinal tract and prescribed calcium iodide and a mixture of the tinctures of aconite, belladonna, and bryonia; also red mercuric iodide; oil of turpentine, and lard to be applied to neck and chest. The next day I found the symptoms same as before. I examined the larynx as thoroughly as possible and except for a slight redness found nothing abnormal.

"On the 8th I was called hurriedly, but the child was dead before I could reach there. The parents said he ate a fair dinner and sat at the table, had played and run about the house all the morning; after dinner he slept twenty minutes, but on awakening he choked severely, grew black in the face (which soon passed), but could not breathe lying down. He vomited part of his dinner, then appeared to feel better. Just before he vomited he appeared to have chills, but only for a moment. In a half hour he suddenly choked up, perspired profusely, and made frantic efforts to get his breath, and expired before anyone could leave the house for assistance. Although the child had become cyanotic during other choking attacks, they said his face did not show cyanosis during the last one. He had no elevated temperature at any time and pulse was normal. I diagnosed it as laryngeal spasm due to acute catarrhal laryngitis."

It is, unfortunately, impossible for us, at this distance and with our comparatively limited conception of conditions, to make a definite diagnosis. Of course we must think of the possibility of pulmonary embolism, though one would naturally expect

here a more rapidly fatal termination. It is also possible that an infected and submersed tonsil was overlooked. Spasm of the glottis may have set up reflex irritation and caused the death of the child. Edema of the glottis, as you are aware, comes on suddenly and often proves rapidly fatal. It is possible that a timely tracheotomy or intubation would have saved the little fellow's life.

We should have been inclined to give apomorphine with lobelin, enough to secure thorough relaxation. We wish we were able to express a more positive opinion; but only most careful study of the symptoms present in the individual and a knowledge of the underlying pathology would enable one to make a definite diagnosis here. We present the case for comment.

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QUERY 5701.—"Ascites." I. P. J., Arkansas, asks aid in treating a patient, age 54, who was healthy until 1905, when he first began to notice decline of health, suffering a mild stroke of paralysis but from which he soon recovered; from that time a general decline of health occurred, and in 1909 he noticed swelling of limbs and abdomen. In April of 1909 he was struck by lightning. After rallying from that, he then was treated for ascites. According to his statements, he has been given about all the medicines that ever were recommended, at last the trocar being resorted to. He was tapped thirty-eight times, altogether 104 gallons of fluid being drawn out. The man's lungs are good; pulse about 72, but the heart sounds as if beating in fluid, yet it is full and strong. The liver is enlarged and easily felt below the ribs, in fact he probably has cirrhosis caused from alcohol used years ago, as in his younger days he lived a fast life. Specimen of urine is submitted for examination.

Unfortunately, the doctor did not state the amount of urine passed in twenty-four hours, hence the total solids cannot be estimated; neither did he give sufficient clinical data to enable us to make a positive diagnosis or suggest effective treatment. However, one thing is very certain, namely, renal congestion (and, we fear, infection). With liver and kidneys both affected, the autotoxemia can be readily understood

and we should naturally expect more or less ascites.

We prescribe a basal treatment and suggest that he report its efficacy in two weeks, forwarding at that time another 4-ounce specimen of urine. Give us some idea of the character of the stools, area of hepatic dulness, condition of tongue and skin, and state how extensively the limbs are involved. We can hardly expect a cure in this case, but very much may be done for the patient.

As a first step, give blue mass and soda; podophyllotoxin and iridin at 7 p. m., and half hourly thereafter until 6 such doses have been taken; the next morning upon rising a laxative saline draught. Repeat this every third day. After the purge, begin with apocynin, a dose every two hours, to every second dose of which cactin, gr 1-67, may be added. One-half hour before each meal give barosmin, and immediately after food chionanthin; one hour later bilein with pancreatin and sodium sulphocarbolate.

Place the patient in the hot wet-pack once a week, giving a hypodermic of pilocarpine as he goes in. The idea is to remove as much as possible of the fluid through diaphoresis. Do not let him drink too much, and carefully oversee his diet. Make him exercise as much as possible in the open air; in fact, he should almost *live* in the sunlight.

QUERY 5702.—“Gelseminine and Specific Gelsemium Compared.” E. J. S., South Dakota, wishes to know how gelseminine hydrobromide, gr. 1-250, compares with the specific tincture of gelsemium. He uses from 15 to 20 drops of the latter every half hour until results follow, but is unfamiliar with the alkaloid and would like to know its efficacy without having to experiment.

The 1-250 of a grain of gelseminine hydrobromide is equivalent to 2 grains of good dried gelsemium root, and therefore to 2 minims of the specific medicine, which is supposed to represent the crude drug minim for grain. As you are aware, the stated doses of the fluid extract is from 2 to 5 minims. It would seem, therefore, that you are giving unusually large doses, i. e., 15 to 20 grains of gelsemium.

It is irrational to compare a given quantity of a definitely acting principle with a fluid preparation which may or not contain the desired quantity of the remedial agent.

Gelsemium, the root, varies in its active-principle content, and 5 grains of root taken from one batch may contain 1-100 grain of gelseminine; or an equal quantity double the amount. If from 100 pounds of gelsemium the chemist is able to secure one ounce or, maybe one-half that quantity of active principle, he has so many known-to-be-effective doses, whereas the regulation amount of fluid extract may or may not possess the desired potency per minim. After all, it is the active-principle content which makes any fluid preparation valuable, and the modern therapist prefers to have his active principle in definite form and mathematically correct dosage ready for exhibition.

The correct way to exhibit gelseminine or any other similar drug is to give the smallest known-to-be-effective dose for an adult at brief intervals to effect—remedial or physiologic. The conditions present in one case may require twenty and the very next individual, perhaps, may respond to five doses. Think and test this matter out and you will realize the superiority of the method.

QUERY 5703.—“Cervical Catarrh with Ulceration.” W. S. W. asks for the best topical application for chronic small white ulcers, looking like blisters, around the os uteri? Eight of them wreath the os. Cervical catarrh is present.

Cleanse the part thoroughly with a swab saturated with H_2O_2 , dry, and touch each ulcer with pure carbolic acid, being extremely careful not to get the fluid upon normal tissues. Neutralize in one minute with alcohol, then apply strips of gauze saturated with an antiseptic oil, carbazol diluted with an equal quantity of olive oil, or ichthyol and glycerin. You may advantageously treat the cervical canal at the same time, disintegrating the plug of mucus with H_2O_2 , then swabbing with the medicament. Internally give hydrastin, collinsonin and calx iodata.



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No. 6

Posthumous Honors

THE race of old-time doctors described by MacLaren has not yet vanished from the earth. Many an humble, unconscious hero is devoting his life to just such work, engrossed in the duties of treating the sick and with no time or inclination to consider his own financial interests. There are thousands in our ranks to whom Agassiz's famous remark applies: they "have no time to make money."

Nor do we have to go to the backwoods to find them. At Wauconda, a town only thirty-five miles from Chicago, the people are raising a monument to Dr. W. C. Dawson. After fifteen years' work for these people Dr. Dawson died, as the result of a breakdown from too close application to his work. During all these years he never refused a call nor sent a bill; and after his death he scarcely left property enough to pay for his funeral.

That those for whom he gave his life should testify their appreciation is natural. The human heart is in the right place, and men can be trusted to do the right thing if it is clearly shown to be such. Nor should they be blamed for neglecting their duty during the doctor's life. That sort of a doctor does not tell of his needs. He

is called in when the family is in straits, a bread-winner disabled, the expenses raised so as to sweep away any surplus, and very often debts must be incurred for the necessities of life. Recovery sees a season of economy to repair the losses; death means a heavy expense to render the last testimony of love to the lost dear one. People must be fed, clothed and sheltered, and the doctor must wait. He knows this, and in his appreciation of his patients' difficulties says nothing of his own.

Besides, he hasn't time. Others demand his every thought, every moment, every power of his intellect, to keep them alive and to solve the problems presented day by day for his solution. The more his faculties are engrossed by this professional work the less he can give to the business aspect of his life. Inevitably he lets his own accounts get dusty, and his "bills payable" accumulate. If he does get a little money saved, his wife's relatives borrow it and never pay it back. For it is one of the inexplicabilities of femininity that the woman who will fight for her chosen man against kin and all the world before marriage, will sometimes "work" him to the limit for her relatives afterward.

One aspect of the case is not touched upon—whether this doctor did his whole duty, did the duty that overshadowed other duties, in giving up his life to his patients. It is questionable. One such man is worth more than a dozen ordinary people. He should have valued his own self and his own work so highly as to esteem it a primary duty to keep himself alive, and in the best condition to do his very best work for his patients. To sacrifice a valuable life, and by its loss deprive the community of his service, for the sake of one or more individuals, was not wise, or just, or right. Our noblest, most heroic impulses, must yet be ruled by judgment. "It is magnificent, but it is not war," said the French officer of the charge at Balaklava.

The remedy?

The whole matter is another evidence of the preposterous relation between profession and community. The doctor is only called when the family is financially disabled, and after the damage he might have prevented by timely advice has been done. Rearrange matters so that preventive medicine becomes a fact instead of a scholastic dream, an actual practice instead of a topic for essayists. Let the doctor's income be supplied while his clients are best able to earn the money, which should be looked upon in the light of an insurance against disease.

Let each doctor limit his services to a list of five hundred subscribers, who agree to pay him so much a month, he to look after them in health as well as disease, and by his skilful management keep them from sickness.

Why not? The recent graduate who only asks twenty-five cents a month from each subscriber would get an income far greater than he does now, without incommoding any of his patients by the burden. The advance to fifty cents and one dollar would be but natural as his services became more valuable, and his clients, freed from the drawbacks of sickness, grew more prosperous; while the accomplished practitioner who could command five dollars a month would have an income of \$30,000 a year, and yet only ask each patient for \$60 annually. That would enable the

doctor to employ assistants, to take his time for post-graduate work, secure the latest appliances, furnish a laboratory. In a word it would solve all the problems of affording the highest class of medical aid at the least cost to the patient, and with the amplest and best secured income to the physician.

Why not? Only because we are inert, and hidebound. We drift on in the old way and present an anomaly in the world's progress, by our antique, obsolete methods.

So let the way wind up the hill or down
O'er rough or smooth, the journey will be joy.
Still seeking what I sought when but a boy,
New friendship, high adventure, and a crown,
My heart will keep the courage of the quest,
And hope the road's last turn will be the best.

—Henry VanDyke.

TAKEN FOR GRANTED

A returned missionary told this story on himself: Preaching for the first time before a savage king, he told the legend of Adam, and added that in consequence of the loss of a rib to form Eve, men had one less rib on one side. The dusky monarch interrupted the preacher, and said he would test the assertion. Calling an emaciated subject, he had his projecting ribs counted and found twelve on each side. Whereupon he remarked: "White man dam liar!" and adjourned the meeting. The missionary had heard the story in childhood and assumed its correctness without investigation.

Funny! We would never commit such an error! But we do, every last one of us, every day of our lives. Much of what we admit unquestioned as truth has no better foundation, and dissipates like mist before the rising sun of investigation. For ages flint arrowheads were known as thunderstones, and treatises were written to explain their formation in the clouds. The recognition in them of the work of aboriginal man is a recent addition to our knowledge.

Here's another—still more recent, and this time we are caught! We have always taught that the only good digitalis is the leaf of the second year's growth, but recent investigations show that the first year's leaves are every bit as good. Then where did we get the idea that the second year's

alone were right? From the latest textbooks; and they from the textbooks preceding; and so on until the original statement is traced back to Withering, nearly a century and a half ago! And in all that time nobody has taken the trouble to test the truth of that assertion, but accepted it as true as Gospel, inculcated the error and handed it along!

Sometimes, in moments of low cerebral barometer the editor gets a dim suspicion that maybe after all he is not so very superior to the rest of mankind.

We do not subscribe to the cynical belief that dishonesty and unfair dealing are essential to business success, and are to be condoned when the success is moderate and applauded when the success is great.—Theodore Roosevelt,

THE DRUGGIST'S DEMAND

Since the medical profession has become insistent in its demand that druggists shall cease to prescribe for the sick, we have been met by a counter demand on the part of some pharmacists, that the physician shall cease to dispense drugs and hand the supplying of these over entirely to the druggist.

Not that the latter intends or promises to cease his medical practice—not in the least. Those who advocate this abscission of the physician's work, also seek to fortify the druggist in his invasion by conferring upon him the title of Doctor of Pharmacy. They reason rightly that the mass of the public may be trusted to draw no nice distinction between the doctor who prescribes merely, and the doctor who not only prescribes but supplies the drugs.

True, the absurdity of the claim has been recognized by the better class of pharmacists, and their journals have either refrained from comment upon it or have flatly denounced it as preposterous. *The Druggists Circular* has boldly condemned the scheme as chimerical, stating, what every sensible man knows to be true, that no legislature will ever take from the doctor the right to administer to his patients the remedies he chooses as needful, and no jury would condemn a doctor for doing so even were such a law passed.

But few of the druggists' journals advocate this law—but, here is the significant

fact—that advocacy, radical and intemperate, has won the approval of many retail druggists. Thus far, therefore, the drug trade has endorsed the proposition.

As yet it can not be seriously discussed by physicians. We are now struggling with a revolution in drug therapeutics, by which the old mess of uncertainties is thrown overboard and a new line of remedies substituted, each of which is always exactly the same as to nature, activity and strength, and consequently in the effect following its administration.

The sum total of this reform is bound up in the one word, certainty. Out of a hundred millions of doses of strychnine, as found in every locality in the world, not one differs in any marked particular from any one of the rest. This is the one essential to scientific medication, the one firm ground on which we may plant our foot while seeking for the next. Unless Drugdom shall so fulfill this ideal that our prescription, going to any pharmacy from Bar Harbor to San Diego, shall be filled with like precision, we can not consent to this surrender of our right to supply our medicines.

Does pharmacy deserve such trust? Does she now supply us with the galenics in such uniform quality as makes prescribing secure? Of them we have pharmaceutical standards established. Every druggist knows the exact standard of strength at which his preparations should be maintained. How nearly does he approximate this standard? For in this world of imperfections and makeshifts we rarely ask or expect absolute exactitude, but merely such an approximation to it as may render the life and the welfare of the sick reasonably secure. Do we get that?

The New York World has for some months been conducting a secret investigation, based on 300 physicians' prescriptions, filled by the pharmacists of the eastern metropolis. Here are some of the published results:

"Fifty percent varied from the standards required by the U. S. P."

"A number of druggists failed to give the medicines called for in the physicians' prescription, and expert chemists were even

unable to determine what the druggists used as substitutes."

"From the analysis of eight different prescriptions of heart-stimulants, three are so low a strength as to be valueless to a patient, while the other five are so overpowerful that death might be caused by their administration."

"Other prescriptions for fevers and colds show that the druggists' preparations in every case would fail to produce the desired result. One contained water and was absolutely valueless."

The following editorial note appeared in *The World*, March 22:

"THE TROUBLE MAKER"

"At a meeting of Brooklyn druggists the doctor who helped *The World* in its investigations of pharmacists' methods was bitterly denounced as a 'trouble-maker.' Obviously he was, and equally obviously there was urgent need for the kind of trouble complained of.

"When fraud, dishonesty, carelessness and ignorance among pharmacists involve grave risk for their defenseless customers, when impure or worthless drugs are dispensed under false pretenses, it is fortunate that someone should make trouble. It is unpleasant for a druggist to be caught cheating and exposed. It might interfere with his business to be arrested, convicted and duly sentenced under the law. But the public, which is absolutely at the mercy of unscrupulous druggists, would be better off, and the medical profession in its own interest should welcome steps calculated to correct wholesale abuses largely at its expense.

"While there never was a swindler or a rogue of any sort who did not regret the activity of the trouble-maker who brought him to justice, there is always a sure and easy way to avoid him. The druggists whom *The World* has detected in the act of adulteration and substitution were free to adopt it. It was only necessary to sell pure drugs and fill prescriptions honestly. Those druggists who do not, should blame only themselves when found out."

The Brooklyn pharmacists missed a golden opportunity when they denounced

the detective instead of the criminals. By that act they showed where their sympathies were placed.

Unfortunately this is not an isolated or exceptional case. Wherever drugs have been submitted to scientific tests, by the Federal Government experts examining importations, by officials acting under the Pure Food and Drug Acts of the federal or state governments, or by private investigators, the same story has been told, of preparations varying so widely from the official standards as to render accurate prescribing an impossibility. The worst feature of the matter is that among prescribing physicians therapeutic nihilism has become prevalent. Failing to recognize the true cause of failure in the imperfection of their drugs and their own consequent inability to employ them effectively, they have thrown drug therapeutics overboard.

As a profession, we do not want to dispense drugs. We have other duties that oppress us with their weighty importance. We have no time to dispense drugs or to devote to the manipulations of the pharmacist when such are really necessary. We would gladly leave such matters to the pharmacist if we could do so with due regard to the welfare of our patient and to our own interests. When pharmacy has shown us that we can do this with a clear conscience and an easy mind, we are ready to consider this claim. Until then we can only regard it as a "bluff," put up to turn us from our demand that neither the pharmacist nor other unqualified person shall be permitted to prescribe for the sick.

No great deed is done by falterers who ask for uncertainty.—George Eliot.

CENTRALIZATION PROGRESSING

We have before us an outline of the Proceedings of the National Confederation of State Medical Examining and Licensing Boards, at the recent meeting held in Chicago. The notable feature of the meeting was the Symposium on State Control of Medical Colleges. The question was discussed from the standpoint of State Law, Medical Colleges, Examining and Licensing Boards and the Medical Profes-

sion. All agreed, without a dissenting voice, in the advisability of exchanging the free and independent institutions under which the American medical profession has been developed, for strictly state colleges such as are now in operation in Michigan, Iowa and Minnesota.

Well, it's the trend of the times and we have naught to do but submit. Harvard, Yale, Johns Hopkins, the University of Pennsylvania, the colleges of New York, and the other great institutions must take a back seat or be remodeled and appear under the guise of state schools. Is it wise? Will it make any better doctors?

BERNARD SHAW'S DEFINITION OF OPSONINS

The erratic yet brilliant Bernard Shaw, the Hibernio-Anglican dramatist, critic and socialist, has made the medical profession the subject for his latest drama, "The Doctor's Dilemma." It is witty and true to life—in spots; sometimes the "spots" are a little far apart, but on the whole he paints a very fair picture of the difficulties that beset the English physician, though as a socialist propagandist he can not lose the opportunity to show how greatly "the times are out of joint," in medicine as in everything else. The "Preface on Doctors," which is almost as long as the drama itself, is a pretty piece of criticism which it can do no harm for any doctor to read.

Ridgeon, the "hero" of the drama, is presumably Sir Almroth Wright, the discoverer of "opsonins." His definition of these substances, as given in the play, is unique and rather likely to stick in your memory, so we print it *literatim*.

SIR PATRICK: What did you find out from Jane's case?

RIDGEON: I found out that the inoculation that ought to cure sometimes kills.

SIR PATRICK: I could have told you that. I've tried these modern inoculations a bit myself. I've killed people with them; and I've cured people with them; but I gave them up because I never could tell which I was going to do.

RIDGEON [*taking a pamphlet from a drawer in the writing-table and handing it to him*]: Read that the next time you have an hour to spare; and you'll find out why.

SIR PATRICK [*grumbling and fumbling for his spectacles*]: Oh, bother your pamphlets. Whats

the practice of it? [*Looking at the pamphlet*] Opsonin? What the devil is Opsonin?

RIDGEON: Opsonin is what you butter the disease germs with to make your white blood corpuscles eat them. [*He sits down again on the couch.*]

SIR PATRICK: That's not new. I've heard this notion that the white corpuscles—what is it that whasts his name Metchnikoff—calls them?

RIDGEON: Phagocytes.

SIR PATRICK: Aye, phagocytes; yes, yes, yes. Well I heard this theory that the phagocytes eat up the disease germs years ago; long before you came into fashion. Besides, they dont always eat them.

RIDGEON: They do when you butter them with opsonin.

SIR PATRICK: Gammon.

RIDGEON: No; it's not gammon. What it comes to in practice is this. The phagocytes wont eat the microbes unless the microbes are nicely buttered for them. Well, the patient manufactures the butter for himself all right; but my discovery is that the manufacture of that butter, which I call opsonin, goes on in the system by ups and downs—Nature being always rhythmical, you know—and that what the inoculation does is to stimulate the ups and downs, as the case may be. If we had inoculated Jane Marsh when her butter factory was on the up-grade, we should have cured her arm. But we got in on the down-grade and lost her arm for her. I call the up-grade the positive phase and the down-grade the negative phase. Everything depends on your inoculating at the right moment. Inoculate when the patient is in the negative phase and you kill; inoculate when the patient is in the positive phase and you cure.

As for the "dilemma", "that is another story." Get the book and read it through. You will not only enjoy it, but it will set you to thinking.

HOCH THE "PACIFIER"

And now the "pacifier", or the nipple, has found its champion and apologist and we need no longer incur the displeasure of the harassed mother and sister and cousin and aunt by forbidding this appetizing and esthetic means of keeping the baby quiet.

Dr. Demetrio Galatti declares, in the *Wiener Medizinische Wochenschrift* (1911, No. 13), that all the excitement about the harmful consequences of the little suckers' using their suckers was unfounded. He claims it is not proved that the nipple causes faulty development of maxilla or teeth, or that it favors the occurrence of stomatitis, at least if it is kept clean.

The action of sucking is a physiologic one and inborn, it is a part of the natural desire for food, for self-preservation. If stimulated by means of a nipple, it produces a stronger secretion of the digestive juices

and probably a more energetic peristalsis.

Our author is undoubtedly correct when he says that many other means that are employed to pacify crying babies are more harmful than the nipple. Still, it is not a very nice spectacle to see the nipple picked up from the floor and put in the baby's mouth, perhaps after being wiped on the mother's kitchen apron, or worse, still, after being licked by the mother or attendant. If a nipple is to be used, let it at least be clean and don't allow it to go from the floor to baby's mouth; don't permit anybody else to moisten it with her own saliva first.

Quality, not quantity, is all important in a population. It is said that a nation with stationary or decreasing population is in decadence, and much ado has been made about the sad condition of France. Yet the thoughtful Frenchman is prompt to remark that he prefers 35,000,000 healthy, well-fed and contented Frenchmen to 100,000,000 of wretched Russians.—John J. Stevenson, in the *Popular Science Monthly*.

RACE CULTURE VS. RACE SUICIDE: AS ONE MEMBER OF THE STAFF SEES IT

The Critic and Guide has always stood for the correction of social evils and fought for the betterment of mankind. The policy of this excellent journal is well followed by a contribution from the pen of Dr. E. B. Foote, in the April number, on "Charity and the Limitation of Children," as well as by the address by Dr. Robinson, printed in this number of *CLINICAL MEDICINE*, which must find a responsive approval in the minds of many thinking men and women. To the writer's mind the most foolish thing Colonel Roosevelt ever did was his ill-considered preaching against "race suicide," and his approval of the indiscriminate raising of large families.

While it is true that many, far too many, couples refrain from procreating offspring, who could well afford to do so, and refrain either from selfishness or from unfounded fear, it is also true that the very couples who are least justified and least in a financial, physical, and mental condition to do so, produce the largest families. It is a fact that the poor who could perhaps raise one or two children in modest comfort have families of eight or ten; and these children

are inevitably neglected, underfed, insufficiently clothed, and, if they survive at all, they eventually swell the ranks of the uneducated and unemployed, and in a great measure the ranks of the vicious and criminal, in short, the ranks of the unfit.

Let us admit that these large families are only rarely the result of deliberate desire. They "happen," following the uncontrolled mating of the parents. Being ignorant of the means of making intercourse unproductive, they take their chances. The writer remembers advising a man, who had just barely recovered from a severe cardiac paroxysm of exophthalmic goiter, to refrain from causing his wife to become pregnant again. She had had four children in rapid succession and was obliged to work in a factory in order to earn bread for the family, the husband being unable to do so. His reply was: "That is the only pleasure I have." The wife replied to a like admonition: "If I refuse my husband, there is no peace in the family."

Four months later the husband brought his wife to the office, asking to have an abortion produced. The writer's refusal cost him the loss of at least six families of his clientele.

There can be no gainsaying the truth of the assertion that large families are far less desirable than are better families. It is wrong to consider women only as breeding cattle, to rob them of everything that life might hold for them by keeping them everlastingly tied to confinement room and nursery. That "children are a blessing" is the sanctimonious assertion of those who cannot bridle their animal passions. Yet we physicians know how women consider these "blessings," how they rebel and fight against the too frequent pregnancies, which might be but are not "blessings." It is not larger families that we need, but better families, a careful selection and improvement of the stock. Cattle breeders know this very well, and cattle are raised with far greater care and forethought than are children.

In order to obtain an improved stock and better families, education of the people in regard to these very important problems is necessary. But how to accomplish this

education is the problem. Books on sexual education are, and have been, published for some years in considerable number. But these books can only hint at what they want to say, for if they come down to brass tacks and give explicit instructions in regard to the limitation of offspring, they are forbidden the mails, because the deliberate prevention of pregnancy is against the law!

How, then, is sexual education in this respect to be accomplished, and by whom? By personal instruction through the family physician? Yes, here is the first beginning of the solution of the problem. First make it permissible to educate physicians, and then let them educate the people.

It may be well enough for wandering savages such as the Australian aborigines, to multiply heedlessly like rabbits and weeds, but it is not well enough in civilized lands where masses congregate in cities and the food problem becomes complex.—John J. Stevenson, in the *Popular Science Monthly*.

RACE CULTURE VS. RACE SUICIDE: AS ANOTHER MEMBER OF THE STAFF SEES IT

Elsewhere in this issue Dr. William J. Robinson gives us a striking view of the dangers and disasters which follow in the train of uncontrolled reproduction, especially on the part of the poor. While I am forced to agree with much that he says, there are many things in his paper with which I cannot agree.

Man, physically considered, is identical with the brute creation. It is of no use, as Dr. Robinson says, to treat the matter from the standpoint of continence. We cannot reform society from the bottom; we must begin at the top. Yet I believe that there is more sexual purity when the people are almost universally poor, or rather in moderate circumstances. Simple living and severe toil keep in check the passions and make it possible to mold mind and life according to moral precepts. When a nation becomes divided into the very rich and the extremely poor, as we are getting to be, when waste and want go hand in hand, and luxury renders abnormal the passions of the one and cupidity blunts the moral precepts of the other, then indeed is

that nation delivered over to the world, the flesh and the devil.

When all the people are poor or in moderate circumstances content is much more likely to reign. The sons, no matter how many there may be in a family, grow up useful, self-reliant men, the daughters, industrious and virtuous women. From this class comes nearly every benefactor of mankind; from these large families of the poor come the balance wheels of society, the brain and brawn of the world. Society is constantly dying out at the top; reproducing itself from the bottom. It is a serious question whether cutting off the supply of children of the poor, or from the so-called middle classes, would not rob the nation of its very life blood, the vitality which makes it great.

Remember that nature is prodigal, and that from the multitude of offspring only now and then one exceeds the average in quality and in strength; these exceptional individuals are the ones which mold the race. Franklin was the fifteenth child, and many of our greatest men and women came from large families—often were among the youngest in these families. Shall we prevent the production of genius? Can we afford to take the chance?

Robinson says that he believes excessive childbirth to be one of the greatest causes of low wages, poverty, ignorance, idleness, sickness, crime and death. I do not think that large families are the cause of these things. The trouble is that a comparatively small class of men are absorbing the wealth of the country as fast as it is produced, leaving to those who create it scarce a bare existence. I think the prime problems to solve are: First, how to insure to all persons, able and willing to work, an opportunity to earn an honest livelihood. Second, to effect an equable distribution of the wealth among the factors engaged in its production. And I am not a socialist, either!

The factors that make repeated pregnancies the terrible thing that they sometimes are, so far as healthy women are concerned, inhere largely in the economic condition. To the woman who has the leisure and the legitimate comforts for the

bearing and rearing of children, who is not handicapped by weakness or disease, who is not compelled to work for a livelihood during these periods of physical and mental stress or fettered by "social" obligations, the bringing up of a large family is not necessarily a burden, and it often is a joy.

There are many conditions in which conception should be prevented. The sick, the deformed, the ignorant and debased, the vicious and immoral not only may be legitimately protected from procreation; they should be prevented from becoming fathers and mothers. And it is here that the right and the duty of the physician should be allowed to assert itself without legal restriction. But to put this information in the hands of everybody, without discrimination, would, I fear, be but to place another weapon in the irresponsible hand of Lust.

The law of the home should be Love, and not Lust. There is too much Lust in the family relation now, and not enough of Love.

Then gently scan your brother man,
Still gentler, sister woman;
Tho' they may gang a kennin' wrang,
To step aside is human.

—Burns.

CREEDS AND IDEALS

A creed is a crystallized expression of belief. It is settled, completed, and admits of no modification, is susceptible of no improvement. The Mahometan says: "God is God, and Mahomet is his prophet;" and there the matter has rested for twelve centuries.

But since progress, or at least change, is unceasing, the viewpoint of men alters and the tendency is for creeds to become obsolete. So we see in medical thought a perpetual crumbling of beliefs and practices, and the new maxims are no sooner formulated than they are the subjects of attacks, increasing in vehemence until the old dogma is overthrown and a new one replaces it.

Medical creeds are matters to which we give passive acquiescence, but always with the qualification that with new knowledge we may alter our view. It is never the

part of wisdom to take the ancient theologic stand: "This I believe; it is right, the only right, and you also must believe it." Arrogance, positiveness, indicate in the speaker's mind a belief in the perfection of his knowledge, and that is enough to dismiss his claim of leadership.

Ideals are different. We form a conception of what we deem most desirable, something as far as possible above and superior to the actual state of affairs, and then we set about working up to it. We may even attain an ideal, but immediately form a new one, far enough above the old one to call forth all our energies in the effort to attain it. Therein lies the value of an ideal, that we are aroused to such effort.

People will always be affected with preventable diseases; yet it is one of the grandest functions of the physician to foresee their possibility, and devise and inculcate the means of prevention. So we institute an organized warfare against the fly and the mosquito, and against any organic dirt that may harbor or convey the germs of infection.

The needs of modern life impose increasing burdens on the brain of men, and by every possible exercise of knowledge and authority, skill and forethought, we must keep at its highest point of efficiency the body and brain of plutocrat and workman, of captain and private in the industrial army.

Every disease has a beginning, and as we study more deeply the course of disease and its causes, we learn to recognize pathologic processes earlier, and the importance of intervening early, before the damage has been wrought.

Disease commencing and becoming manifest as a result of disorder of the physiologic functions, we study these functions more attentively, that we may be able to recognize the earliest departures from normal; and we likewise study the properties of medicaments, that we may choose exactly those best fitted for the conditions before us.

In all these and many other ways our science and art advance toward an ideal, which is fairly visible and which we can not pronounce unattainable.

Nevertheless, those who are most proficient on this line are well aware how very far short we fall of its fulfillment. Some of the reasons for this are insurmountable, others are within easy reach. One of the latter is the collection of data from so many sources as to eliminate the errors inherent in the observer's individuality—the personal equation. Here is where the immense value of collective investigation comes in.

This journal reaches thousands of medical readers every month. To this immense body present any therapeutic proposition, and in every possible grouping of conditions it will find those who can apply to it the test of practical trial. The result of such widespread testing, carefully observed and reported, when grouped and analyzed, forms a composite picture that must approximate the truth more closely than the report from any one man, however exceptional may be his qualifications and opportunities. The rule and its exception may be thus demonstrated with a completeness for which the medical world has never previously had such an opportunity.

For one thing, the editorial group of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* is judicial in its attitude. It does not begin by condemning a drug or commending it, and then suppress or minimize all the evidence that militates against the expressed view. It is as ready to receive adverse as favorable testimony; for our one desire is to establish the truth, to fix the limits of a remedy's applicability.

One way of doing this would be to take up one drug each month, and ask for reports upon it. Suppose we begin with a comparatively new introduction, not one of the "alkaloids," in which we might be supposed unduly interested, but a chemical, not monopolized in any way, but absolutely open to all sources of supply—chromium sulphate. It is claimed:

1. It may be administered up to sixty grains *per diem*, and for long periods, without harm, immediate or remote.

2. It is a useful remedy in (a) impotence; (b) prostatic hypertrophy; (c) ataxia; (d) migraine; (e) neurasthenia; (f) uterine fibroids; (g) disorders of the menopause; (h) exophthalmic goiter.

3. Overdoses irritate the stomach, causing nausea and vomiting. What are overdoses for men, women, children, well or ill?

On each of these points we should have at least one thousand reports. Let us place the day for such reports to reach us as December 1, which will allow the tabulation to be made in time for the journal of February, 1912. That will allow time for trial and early effects being noted. For ulterior results we can wait, publishing these whenever they appear in notable numbers.

Next month we should introduce another remedy for similar study, and so each successive month. What shall they be? Therapeutics is well filled—littered up—with unplaced ideas, with remedies half-tested and then deserted for newer introductions. Let us have your suggestions.

CONSISTENCY, THOU ART A JEWEL!

JEWEL NO. 2

We have just received a nice little book of 75 pages, these embodying all the work of the Council on Pharmacy and Chemistry for the year 1910, or at least all of it that was reported through the columns of *The Journal of the American Medical Association*. There are ten articles in this interesting volume. Here are the titles of four of them:

Scopolamine and Morphine in Narcosis and in Childbirth.

Cactus Grandiflorus.

Quinine Arsenate Refused Recognition.

Strychnine Arsenate Refused Recognition.

The Council was *very* busy during 1910.

"PASS IT ALONG"

We are always willing to give credit to anyone who says or does a good thing—no matter who he may be. This time it is *The Christian Science Monitor*, the new daily paper published by the Eddy sect—and a good paper it is, by the way: clean, free from sensational matter of all kinds, as truthful as any daily paper can be, and really supplying "all the news worth reading."

The Monitor uses and keeps drumming at the phrase which stands at the head of this article—"Pass It Along." It believes that many new subscribers may be secured if its readers will pass their copies of the journal over to neighbors and friends, after they have read them.

If this is a good policy for a Christian science journal, it ought to be a much better one for a medical journal, and especially for *THE CLINIC*. If you like this number, other doctors will like it also. All that many of them need to make them subscribers and regular readers is an opportunity to see what we are doing and an encouraging word from you.

Of course, if you preserve your copies of *CLINICAL MEDICINE* (as you should) and have them bound, we have not a word more to say; but if you don't keep your copy, "pass it along." Let's see if we cannot double the size of our subscription list within the next twelve months. You can help us mightily. Will you?

In the fell clutch of circumstance
I have not winced or cried aloud,
Under the bludgeonings of chance
My head is bloody but unbowed,
It matters not how straight the gate,
How charged with punishments the scroll,
I am the master of my fate!
I am the captain of my soul.

—Wm. Ernest Henley.

QUININE AND THE OPSONIC INDEX

One of the most promising fields opening up before the investigator is that of ascertaining the action of drugs, as shown by the newer physiology. The therapeutists of the last century considered their whole duty accomplished when they had tested the powers of remedies as influencing the secretions, the pulse, respiration and temperature. Then came the era of the neurologist, and our text-books are burdened with a wealth of information upon the influence of drugs over the reflexes, the various forms of sensation and the motor nerves, which few ever comprehended sufficiently to utilize in clinical work.

Now we face a new duty, that of fixing the potency of our drugs in affecting the leukocytes, the internal secretions and the

opsonins. In regard to the latter some interesting data are supplied in a recent number of *Le Monde Medical*. While the vaccines act only against the one specific microbe corresponding to the bacterin employed, drugs that directly stimulate phagocytosis aid the organism in resisting any and all pathogenic intruders. The one is "monovalent," the other "polyvalent."

The matter of dosage is always of primary importance. Phagocytosis is increased by small doses of quinine, lessened by ordinary doses and stopped by large doses. Stimulation by small doses is a general law, and so is sedation by large doses. The curative action of quinine in malaria depends on its influence over the plasmodia and this requires the administration of quantities sufficient to diminish phagocytosis at the same time. It is a race between the two. If the leukocytes and the red blood-corpuscles are more vulnerable than the plasmodia, the toxic effects of quinine will appear before the doses have been elevated to the curative degree.

MODERN IDEAS ABOUT NUTRITION

We all get cranky as we advance in years. Every last one of us develops fads, and as our attention becomes more and more fixed on one thing, we find more and yet more in it to justify that attention. The editor is still very human, and not a whit less liable to human infirmities than his fellows; probably more so, because his work tends to develop in him the didactic, preachy quality. He has this advantage, though, that his constant review of other men's work tends to correct his growing egotism and keep it within bounds.

As some of our readers may have suspected, one of our own many fads has been the alimentary canal and the consequences of its neglect. The more we have observed and studied the effects of fecal toxemia, the more potent for evil has proved this etiologic principle, and the more surprising the blindness of the doctor on it. Hence we have dinned into your ears, in season and out of season, our war-cry—"Clean out, clean up and keep clean."

This removes the most fruitful cause of human ills; nevertheless it is but a beginning, a preparatory clearing away of rubbish and making way for the constructive work to follow. This leads us to that grand theme—"Nutrition."

Growth, development, repair, restoration, all the constructive work of the physician, require his full comprehension of the nutritive apparatus and its physiologic operation. Here, again, we reiterate our urgent warning, that the true physician must not rely on his school physiology, but provide himself with a new textbook every five years, and keep up with the rapid advances in this department.

In the last number of "International Clinics", W.S. Hall contributes a summary of "Recent Advances in our Knowledge of Nutrition." Let us see what the distinguished Professor of Physiology at Northwestern University has to contribute to the good of the order:

Nutrition problems are chemic problems—concerned with digestion and absorption. In the living cells occur all anabolic changes.

Insalivation promotes gastric secretion; the escape of acid into the duodenum incites pancreatic activity, by acting upon a substance in the duodenal mucosa and forming secretin, which is carried to the pancreas by the blood, where it excites the secretory activity of this gland. This is one of the group of gland excitants to which Starling gave the name of hormones. Another is the gastrin of Eddins, formed by the pylorus and carried to the gastric fundus through the blood, inciting glandular secretion. Pawlow gave to the activating agent of trypsin the name of enterokinase, formed in the intestines, as well as erepsin, which continues the hydrolytic cleavage of protein after pepsin and trypsin activity have ceased. The final result is to break down carbohydrates into monosaccharids; a necessary step, since disaccharids, like maltose, are ejected by the kidneys.

Lipase splits fats into glycerin and acids; the latter are saponified and this soap emulsifies the remaining fats, the minute division enabling the lipase to complete its work rapidly.

The discovery of erepsin and its activity in breaking proteins into aminoacids suggests the necessity for such a decomposition.

Very little absorption occurs from stomach or duodenum. The foods reduced to monosaccharids, soaps, peptone and aminoacids, are rapidly absorbed by the villi of the jejunum and ileum, the living cells possessing the power of selection. Sugars enter the veins and go to the liver. Soaps and glycerin in the epithelium of the villi form neutral fats, and pass into the blood through the lacteals, circulating in suspension as exceedingly minute globules.

Peptone is toxic in the blood, and quickly excreted by the kidneys. Synthesis must occur early, since no peptone and only a trace of aminoacids can be detected in the blood. Haliburton claims this occurs in the liver and other bodily tissues, forming coagulable proteins, like those of the synthesizing tissues. Pavy thinks the intestinal epithelium is supplemented by the small lymphocytes of the lacteals, which absorb aminoacids and synthesize them into protein, after which they promptly undergo autolysis, affording proteins to the lymph and blood.

This demolishes the old hypothesis that proteins are absorbed into the portal system.

Whitehead found that fats are absorbed as soaps and resynthesized into neutral triglycerides. Cramer found that some protein is absorbed unchanged, as shown by alimentary albuminuria after eating egg-white. But there may have been a hydrolysis and resynthesis. Pringle and Cramer found that much protein is taken up by the lymphocytes, whose autolysis yields the proteins to the blood. But other experimenters concluded that the stomach is mainly concerned in protein assimilation, and the absorption of incompletely digested proteins.

Voit, in studying starvation, found that the carbohydrates are replenished from the proteins as fast as they are oxidized; the stored fats mainly supply heat and motor energy while they last, the length of life without food depending on the supply of fat present. The protein metabolism also depends on this fat, the waste of

proteins being supplied by the fat as long as it lasts, after which the protein tissues waste, the loss of weight being then 11.5 times greater, since 33 grams of proteid yield only as much heat as 2.8 grams of fat.

Meeh found that the body heat varies with the metabolism, and with the superficies of the body, so that the volume of metabolism varies with the superficial area of an animal. For man the area equals 12.3 times the cube root of the square of the weight.

Carbohydrates may be ingested as starch and sugar, or derived from proteins. Starches are changed to dextrose, saccharose splits into dextrose and levulose, lactose into dextrose and galactose. These products are utilized by the muscles, which can not use the disaccharoses. Maltose in the blood is changed into dextrose. The carbohydrates are stored in the liver as glycogen temporarily; if the supply is excessive they are stored as fats. The glycogenic function of the liver is lost when its cells lose vitality, being anabolic; but their glycolytic action, being an enzyme katabolism, continues after death.

Fats come from ingested fats, which may be katabolized or stored as fats, specific to the species storing them, not to the species furnishing them; from sugar, by reduction and rebuilding, in the liver, the connective tissue storehouse having selective power but not synthesis; from proteins, the food proteins splitting into nitrogenous and carbonaceous portions. Proteins come only from food, and through the digestive epithelium. These are broken down into aminoacids. Gelatin subjected to hydrolytic cleavage presents the whole list of aminoacids, except tyrosin, cystin and tryptophan. The latter is the one absolutely essential, hence gelatin will not maintain nitrogen equilibrium.

Folin showed that the nitrogen distribution in urinary constituents depends on the total nitrogen present; as does sulphur distribution between inorganic, ethereal and neutral, on the total sulphur present. The kreatinin eliminated on a meat-free diet differs with individuals, wholly independent of the total nitrogen eliminated. Reduction of protein metabolism lessens

the uric acid, but not proportionately to the total nitrogen reduction. Urea results from exogenous protein metabolism, and varies with the total nitrogen excretion of the urine. Most of the protein in standard diets is not needed, at least its nitrogen is superfluous, and the organism has developed special means of getting rid of it so as to utilize the carbonaceous part.

Kreatin in food is eliminated in urine within twenty-four hours. Given in doses of 1 to 2 grams, with a low nitrogen diet, kreatin is not converted into kreatinin, nor eliminated as kreatin or urea. Given in doses of five to six grams, a little is eliminated unchanged within twenty-four hours, the rest is not eliminated at all. Taken with rich protein diets, one-half is eliminated unchanged within twenty-four hours, the kreatinin elimination being unaltered. Large ingestion of beef by a normal person increases kreatinin elimination slightly; the elimination of kreatin, normally absent or slight, rising to four grams.

Hence there is no evidence that kreatin precedes kreatinin; they differ fundamentally, biologically. It is not yet clear whether kreatin is a food or a waste product.

The only thing that modern science could suggest as a distinctive test for blue blood would be the Wassermann reaction.—Woods Hutchinson.

"HOW TO BECOME A NEURASTHENIC"

The Critic and Guide offers the following pertinent suggestions as to "how to become a neurasthenic."

Eat no breakfast.

Indulge in but one meal daily; at any rate not more than two. Eat no meat. Eat freak cereals, vegetables, nuts and fruit.

Masticate every morsel two hundred and sixty-eight times—two hundred and sixty-seven times won't do.

Take a cold bath every morning.

Take a laxative every day, whether you need it or not. Better still, a cathartic. Take enemas frequently.

Be massaged daily.

Read the health magazines daily.

Read all the books on how to gain self-control and on psychotherapy.

Concentrate the mind upon the digestion and upon all articles of diet.

Upon every possible occasion discuss your imaginary troubles with your friends and coerce your wife into catering to every dietetic whim that you can formulate.

Buy a lot of apparatus for indoor exercise and roll a cannon-ball around the abdomen every day along the course of the colon.

Be treated by someone who uses only the static machine in his practice for all cases—one of those lads who can reduce an enlarged prostate with vacuum electrodes.

If all else fails, try Christian science.

Is it any wonder that we are becoming a race of neurasthenics? By the way, who was it said, "Live on a sixpence—and earn it." He was prescribing for a too-opulent neurasthenic. Clean living, temperate living, and work that we love, these are things that we should teach our clients—also, that at the very inception of ill-health they are to come to the doctor, and obey him implicitly.

It is as hard to live in this world with your lover out of order as it to love with your liver out of order.

—G. F. Butler.

"OUR PROGRAM FOR THE NEXT FEW MONTHS"

We think we have a rather interesting program arranged for the next few numbers of *CLINICAL MEDICINE*, one which we believe will meet with your hearty approval and add to the pleasure and profit of every reader.

In July we begin the publication of a series of articles on "Gonorrhea and Its Complications" by Dr. E. J. Angle of Lincoln, Nebraska. In the same number we shall continue our campaign for a "square deal" for the doctor. Dr. Wm. J. Robinson will have a paper on "Is Anything the Matter with the Doctor?" This is the address delivered before the Liberal Club of New York and its discussion was participated in by such well-known writers as Upton Sinclair, Samuel Hopkins Adams, Norman Hapgood, Dr. Robert T. Morris, and Dr. Woods Hutchinson. There will also be printed in this number the symposium on "Quackery" given before the Therapeutic Society of the District of Columbia, consisting of papers by Drs. Egbert, Latimer, Williams and others. In the same issue you will find a red-hot discussion of some of the interesting papers on the sex question which have appeared in our papers within recent months.

The August number will be given up very largely to the subject of typhoid fever and intestinal autointoxication. Among the articles which we have on hand are the following: "Sewerage Disposal in the Country," "The Care of the Mouth in Typhoid Fever," "The Relation of Intestinal Autointoxication to Mental Diseases," "The Management of Typhoid Fever in Hospital and Home," and "The Treatment of Typhoid Fever."

The September number will be given over to a discussion of the gynecological and obstetrical problems of "everyday practice." There will be a paper on "Non-Surgical Gynecology" by Dr. George H. Candler, and articles by Drs. Lewis, Leeds, Shaw, Davis, Cannon, Pratt, McCowan, and many others.

I am sure that every reader of *CLINICAL MEDICINE* will also be glad to know that the series of papers on "Everyday Surgery" by Dr. Breakstone, will be continued, and that we shall have other articles by Dr. Perry. Dr. Chas. Stuart Moody will continue his interesting articles on Indian life and other subjects.

We think that from this program it will be quite apparent that there will be no letting up of editorial activity during the summer months.

The true doctor is inspired by a hatred of ill health and a divine impatience with any waste of vital forces.

—Bernard Shaw.

THAT FAVORITE PRESCRIPTION

We all like to jump on the man with a "favorite" prescription. Our sympathies being naturally with the under dog, inasmuch as we have occupied that unenviable position on several occasions—though not for long—we want to rise with a word of defense for the "favorite prescription."

A routine combination of drugs is not necessarily illogical; on the other hand, it may be, and often is, just the thing that should be given. We can take it for granted that if a certain preparation or mixture has been used for a long time by any really able physician, there must be something inherently good in it, and we

can be quite sure that this is true if some druggist has quietly stolen said prescription and turned it into a patent medicine, or if the same thing has been brought about in a more "ethical" way by the absorption of this "prescription" into the price-lists of the great manufacturing houses and eventually into that arcanum of therapeutic mysteries, the National Formulary, or that holy of holies, the United States Pharmacopeia.

If we glance casually through the pages of that great work, we shall find that a very large percentage, indeed, of the remedies described in it are compounds, and if we are students of the history of materia medica, we shall learn that many of the remedies embodied therein were formerly the favorite prescriptions of great physicians, later taken up as proprietary medicines and still later exploited as patents, until finally their value was recognized and their virtues were officially admitted.

This being the case, we suggest that considerable benefit may be obtained by the careful scrutiny of any remedy which seems to be of peculiar efficacy in the hands of a number of practitioners. Instead of denouncing it, why not try to find out what makes it popular? Let us go at it logically, eliminating the useless, the harmful, finally getting right down to the elements of primal efficiency contained in this wonder-worker. Thus, in the majority of cases, we shall find that out of the mixture of five or six or more different ingredients there are one or two or three which do the work, but sometimes these are so judiciously combined that one modifies or emphasizes the action of the others, that making them synergistic.

While we believe in and emphasize the value of the single remedy, it must not be forgotten that combinations under certain conditions are logical. How many physicians are there who do not use, or have not used, the compound cathartic pill, Fowler's solution of arsenic, Basham's mixture of iron, Waugh's admirable anodyne, that "chlorodyne" combination introduced as a patent medicine by a doctor who had learned of its value in therapeutics, or

the dosimetric trinity, so well and favorably known to "the family."

Yes, we need to study the favorite prescription. We can learn something from it. Study it with the idea of simplifying it, and of using just the ingredients which are indicated in a given case. If we do this, we must inevitably profit thereby.

Our mouths were never patterned
With the corners drooping down—
No more were we created
To just be hanging 'round.
Then let's be up and doing,
Keep a hustling all the while
And cheer our fellow travelers,
With now and then a smile.

—Rube Wight.

THE RELIEF OF DYSPNEA

Le Monde Médical, frankly commercial, contains in every number something of practical value. In the issue for July is an abstract on the treatment of dyspnea, by Prof. Albert Robin, from which the following is taken:

"In presence of a patient suffering with dyspnea the physician's first duty is to relieve the suffering, the second, to ascertain its cause."

This sounds like strange doctrine; but, then, isn't it good advice?

There is a long list of agents that relieve dyspnea, all uncertain and soon wearing out. Robin mentions oxycamphor in spirit, 50 percent, dose 15 drops, up to ten times in twenty-four hours; validol, 10 drops up to ten doses a day; aromatic spirit of ammonia, 20 to 50 minims; acetic ether, 30 minims in a 4-ounce mixture, 2 drams every hour; ammonium carbonate, 30 grains; compound tincture of camphor, 1-2 dram up to six times a day; heroin, 1-10 grain two or three times a day; tincture euphorbia of pilulifera, 10 drops for eight doses a day; ethyl iodide inhalation, up to ten times a day; oxygen inhalations; and cold-packs—a very useful measure.

But nothing is said about aspidospermine, which is one of the remedies most useful in this condition. Heart weakness calls for digitalin, or other appropriate remedy, and in emergencies the "hypo" of morphine will give temporary relief.



The Limitation of Offspring

*The Most Important Immediate Step for the Betterment of the Human Race,
From an Economic and Eugenic Standpoint*

By WILLIAM J. ROBINSON, M. D., New York

President of the American Society of Medical Sociology; Editor of *The Critic and Guide*, *The Medical Review of Reviews*, *The American Journal of Urology*; Author of "Never Told Tales," etc.

EDITORIAL NOTE.—This is the address read before The American Society of Medical Sociology, March 4, 1911, by its president. As we stated last month it is "probably the most startling, the most revolutionary paper that has ever appeared in these pages." It is expected that there will be a storm of opposition, of counter-criticism. Send it in. We do not publish Dr. Robinson's paper because we agree with him, for we do not—at least in many particulars. We publish it because he has opened up a big question, a tremendous question, one which deserves thought and investigation, and which we can only solve, in the right way, by getting at it from every point of view, every angle. What do you think? Is Dr. Robinson right, or is he wrong? Has he found a real solution to a great social problem, or can the desired end be better accomplished in other ways? The columns of *CLINICAL MEDICINE* are open for reply; only be brief, for many will doubtless wish to be heard.

SHOULD my address seem somewhat unusual to you, I beg you to remember that the entire progress of the human race has been due to unusual things.

If Spinoza had not thought some unusual thoughts, we might still be cherishing the free-will fetish; if Morse, Stephenson, and Fulton had not thought some unusual thoughts, we should not have the telegraph, the railway, the steamboat; if Edison had not thought some unusual thoughts, we should not have the incandescent light, or the phonograph; if Bell had not thought some unusual thoughts, we should not have the telephone; if Herz and Marconi had not thought some unusual thoughts, we should not have wireless telegraphy. If Bruno, Voltaire, Paine, Ingersoll, and others, had not

said some unusual things, the world would be steeped in ignorance and superstition, even much deeper than it is now. If Marx and Lassalle had not thought some unusual thoughts, we might still be groping in the dark as to the causes of our economic miseries. If Wallace and Darwin had not thought some unusual thoughts, a much larger number than is now the case would still be hugging the childish belief in our descent from Adam and in the creation of the world in six days some brief six thousand years ago.

If Semmelweis and Holmes had not thought some unusual thoughts, our puerperal women would still be dying by the thousands; if Morton, Simpson, Long, and Wells had not thought some unusual thoughts and done some unusual things, we might still be without the blessings of

anesthesia; if Pasteur, Koch, and Lister had not thought some unusual thoughts and performed some unusual experiments, the millions of lives saved by preventive medicine would still continue to be sacrificed; if McDowell, Sims, Chopart, Pirogoff, Billroth, Bergmann, Czerny, Kocher, Murphy, and numerous others had not done some unusual things, surgery would still be where it was a hundred years ago; if Aronson, Behring, and Roux had not thought some unusual thoughts, we should not have diphtheria antitoxin; if Ehrlich had not gotten some unusual ideas into his head thirty years ago, we should not have salvarsan now.

And so I could go on showing that it is the unusual things and thoughts that move the world.

Humanity may be divided into two classes. One class thinks that this world is all right, that things are as they should be. In fact, their motto is, "Whatever is, is right." With such people, we can have nothing to discuss. Where ignorance is bliss, it is folly to be informed, and we can only envy them their ignorance.

The people of the other class—and let us be thankful that their number is growing larger and larger—do not think that the world, that is, the human race, is all right. They perceive the terrible misery, the degrading poverty, the cruelty, the rowdiness, the ignorance, the superstitions, the killing drudgery and monotony all around them; their minds revolt and their hearts bleed at the spectacle, and they say: "No, this cannot be right, this cannot go on, it must not be permitted to go on"—and they look around for remedies.

Not all the thinkers and sociologists agree on the remedies; if they did, we should arrive at the social reformation much sooner. This diversity of opinions cannot be helped; perhaps it is better so: through a diversity of opinion and through a multiplicity of discussion, provided the discussion be honest and sincere and not unnecessarily acrimonious, we shall arrive ultimately at the truth.

I have *my* remedies for the uplift and the regeneration of humanity and for bringing happiness to every human being.

This is not the place to discourse on all the remedies—it would take too long to discuss them all in detail. I will therefore limit myself only to one, perhaps the most important at the present time.

The Bane of Many Children

In the very first year of my practice I had noticed that the advent—the birth—of a child, which is supposed to bring joy and happiness to the house, often brought gloom and misery. I have watched the gradual growth of families, and so have you. The first child was like the arrival of some great treasure; it was really a joyous event and all were happy. The second child was received with less joy; the third with indifference; during the fourth pregnancy, the mother came to you and timidly, hesitatingly, asked you if you could not do something for her; "it was only three weeks overdue"—etc. . . . you know the rest. In short, the fourth child was exceedingly unwelcome and was merely tolerated; and each succeeding child was more and more unwelcome. I have known cases where the child in the womb was *cursed*, and both the father and the mother prayed and hoped that it might be aborted or born dead! And you all know of cases where there were distinct signs of disappointment on the faces of mother and father when the child was born healthy and made its presence known by a lusty cry. And we all know families that started to live a nice, comfortable life, and whose standard of living became gradually lower with each child, until they reached the lowest depths of abject poverty—with the children dirty, ragged, uncared for, and consigned to the streets.

I have investigated the subject, and I have devoted years to its study, and I have come to the positive conclusion that excessive childbirth among the poor is one of the greatest curses that afflict humanity. It is one of the greatest causes of low wages, poverty, ignorance, idleness, sickness, crime, and death.

Is There a Remedy?

What is the remedy against this condition? To advise the people not to marry?

That would be as wrong as it would be unfeasible. Man is not only a gregarious, he is a social animal, he craves companionship, and the only little pleasure the poor man sometimes has is his wife and his little home. To advise bachelorhood would be wrong socially as it would be useless, for the mass of the people would not follow it, and it is absurd to give advice which cannot and will not be followed.

"Let them abstain." To advise married people to abstain for months and years at a time is as hypocritical, as insincere, as dishonest, as it is pernicious. It is hypocritical, insincere and dishonest, because the one who gives such advice knows that it is impossible of being followed. It is pernicious, because if it were followed, its effect on the health of its followers, on their nervous equilibrium, on their affections even, would be in the highest degree disastrous.

Advice to the poor—including in this term workingmen, small business men as well as struggling professional men—to remain single, or if married to abstain from intercourse, being unworthy of consideration, what other remedy is there to help them out of the difficulty?

Regulation is the Answer

There is a simple remedy, and that remedy is to teach the people how to regulate the number of their offspring, so that they may have only as many children as they want, and only when they want them; in other words, the remedy is to teach the people the proper means of the prevention of conception.

And, while I may touch upon various other points, the chief object of my address tonight is to advocate that the teaching of the prevention of conception be considered, not only perfectly legitimate, but that it be considered the *duty* of the medical profession to impart this information to their patients. Our present laws regarding the imparting of information of the prevention of conception are in the highest degree brutal and infamous. These are the only adjectives that will characterize them properly. Introduced and dragged through by puritani-

cal inquisitors, they are a blot on our country and a disgrace to our nation!

Do you know what the punishment is for sending by mail or express any kind of information on the subject of prevention, be it a formula, a method or simply a suggestion? The punishment is five years at hard labor plus five thousand dollars' fine. And there are contemptible spies whose office it is to write to physicians, inducing them to break the law, so as to get them into their clutches. I get hundreds of such requests every year. Of course the writers disguise their identity and the letters are supposedly from poor women who have already nine children and can't afford to have any more, or whose husbands are mildly insane or epileptic, and so forth.

But you may think, things cannot be so bad. You may think the law would not be so cruel with a physician as to confine him in prison because he sent a formula to some poor man or woman. Ah, that is just the trouble. We are all interested in our own little affairs; what happens beyond our noses we do not know and do not care to know, and we are, therefore, often incredulous when we are told of the cruelties, of the brutalities, that are practised two steps away from us. Let me read you a letter. I will read it in its entirety, including the letter-head.

UNITED STATES PENITENTIARY, LEAVENWORTH,
KANSAS

TO THE PERSON RECEIVING THIS LETTER: Do not come to visit prisoners on Sundays, Washington's Birthday, Lincoln's Birthday, Decoration Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas or Saturday afternoon. You will not be admitted. Persons corresponding with prisoners must carefully comply with the following directions, viz.: Write plainly in the English language only. Confine yourself strictly to business or family affairs. Correspondence about criminal and indecent matters will not be tolerated. In addressing letters and newspapers, write the prisoner's full name and register number plainly in ink on the envelope or newspaper wrapper in order to insure the prisoner receiving them. All letters and newspapers improperly addressed will be returned to the post-office. Do not write anything on newspapers, magazines, books, etc. Postage stamps and stamped envelopes will not be admitted. Postage stamps are furnished by the Government. Daily and weekly newspapers of a respectable character, magazines, religious papers and books, family photographs, comb, brush, tooth powder or soap, toothbrush, small hand-mirror, suspenders and plain white handkerchiefs are admitted during the prisoner's good conduct. In sending letters, newspapers, books, etc., use postage stamps enough to insure delivery. All letters, papers, books, magazines, etc., are closely examined before being delivered to prisoners. Money may be sent by draft or postal order. If sent in any other way, it will be at sender's risk. All moneys received will be kept in the office to the prisoner's credit and paid to him on his release, or it may be sent, on his order, upon the approval of the Warden, to his relatives and friends. No eatables, liquids, tobacco or cigars will be admitted, nor any articles except those mentioned above. Tobacco and toilet soap are furnished by the Government. Prisoners can write letters but once every two weeks and see friends or relatives no

oftener than once every four weeks, except on special written permit of the Warden obtained before coming to the Penitentiary. All letters and newspapers addressed to prisoners with the full name and register number written plainly in ink on the envelope or wrapper should be sent in care of P. O. Box 7, Leavenworth, Kansas.

To the prisoner. Write plainly in English. Do not interline. Put but one line of writing on each ruled line. Letters addressed to "General Delivery" in cities of 10,000 inhabitants and over will not be mailed. Letters addressed to prisoners and received from prisoners in penitentiaries, reformatories and jails will not be mailed or admitted. Correspondence with prisoners discharged from this penitentiary not permitted.

WRITE YOUR NAME AND REGISTER NUMBER HERE	WRITE FULL ADDRESS OF YOUR LETTER HERE; GIVE TOWN, COUNTY AND STATE Street and Number in Cities of Free Delivery
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Name G. Alfred Elliott, M. D. Register No. 5244	Name Dr. William J. Robinson No. 12 Mt. Morris Park West Town, New York City County
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Prisoners are permitted to write only on this style of paper and with pencil, except by a special order.

May 23d.....1910 State. New York
Dr. William J. Robinson.

MY DEAR DOCTOR: Quite well knowing that receipt of a letter from a man in the penitentiary would cause you surprise, I write you with a feeling that I am fulfilling a long-deferred obligation. An obligation in as much as I have always had a desire to express my appreciation of your high standing in the medical profession, and I take this opportunity of expressing my greatest thanks and at the same time extending my hand in congratulation of your high and noble ideals as to the welfare and betterment of the human species.

With the expiration of my subscription to that harbinger of light and truth, your *Critic and Guide*, I am now without medical literature of any kind.

My conviction was secured upon that clause of the statute which refers to the giving of information whereby or whereat a remedy can be procured for the prevention of conception, and upon conviction I received a sentence of ten years and a fine of ten thousand dollars. The evidence consisted of two decoy letters written by an aide to the secret service department, and at the trial her own testimony brought forth the facts that she had passed the menopause ten years previous. Owing to the tender pleadings of this woman's letter my sympathies were aroused, and I replied and gave said information gratis and, as I believed, consummated a most humanitarian act.

After a Federal Grand Jury returned an indictment against me, I sold my property, and the attorneys' fees for my defense at the ensuing trial drained me of every dollar which I possessed.

Trusting that I may soon have the great pleasure of hearing from you, I am,

Sincerely yours,

G. ALFRED ELLIOTT, M. D.,
Box 7, Leavenworth, Kan.

I have corresponded with Dr. Elliott, and asked him why he got double the maximum sentence, and he wrote me that they gave him the maximum penalty for each offence, i. e., for each reply to the two decoy letters.

Do you see the brutality of the thing? Ten years at hard labor and ten thousand dollars' fine—or a day for every dollar—for having sent two prescriptions in response to two decoy letters! Let us assume that the law against the sending of anticonceptional information is not a stupidly fiendish law, let us assume that it is a perfectly proper law, and that Dr. Elliott broke it. Would not imprisonment for six months or one year have been sufficient as a punishment? Why destroy a man's life forever? Even the maximum penalty of five years and five thousand dollars was not sufficient to satisfy the revengefulness of his prosecutors; they gave him the maximum penalty for each offence, making it ten years and ten thousand dollars. I wonder at their generosity; they should have tried to catch him on twenty offenses and then given him one hundred years and fined him \$100,000.

I tell you, my friends, the Torquemadas, Philip the Seconds and Alexander the Sixths are not all dead yet. We have now among us puritans and ignorant fanatics who would crush us and burn us if they had the power. And remember, there is no cruelty like religious cruelty and there is no brutality like the brutality of the hypocritical pharisaical puritan of the type of Anthony Comstock.

Is There Justification for the Law?

Having shown that there is an extremely drastic, nay brutal, law against the dissemination of any information about the prevention of conception, and having shown you that the law is not a dead letter, but is applied mercilessly, revengefully, let us now consider whether there is any justification for such a law. In other words, let us consider whether the knowledge of the prevention of conception is likely to lead to dire results, whether it would tend to lead to physical or moral injury of the people, or not. If yes, if the knowledge is likely to have disastrous effects, then the law against the dissemination of such information is justifiable, drastic as it may be; if, however, the knowledge of prevention of conception is going to lead only to beneficial results, then the

presence of such a law on our Federal statute books is an infamy, and every thinking man, every humanitarian, should protest against it with all his might, and we should not rest until it has been repealed; we should not rest until this infamous blot, which is a menace to every physician and every advanced thinker, has been wiped off our penal code.

The Argument of Race Suicide

The first objection we encounter when we advocate the limitation of offspring is the bugaboo of race suicide. Our dear opponents are in mortal fear that if people learn how to prevent conception, they will stop having children altogether and in half a century or so the race will die out. This is a groundless fear and a silly calumny on the human race.

The parental instinct is a pretty strong instinct and is implanted in the breasts of the majority of normal people. The parents are rare, indeed, who do not wish to have at least one or two children. Those who have seen the anguish of some wives who have remained sterile for several years after marriage, those who have seen mothers with contracted pelves knowingly subjecting themselves to the dangers of a cesarean section only to have a living child, those who have seen married men undergoing all kinds of treatment in order to be able to have an heir, will not share the fear that when the knowledge of the means of prevention has become common property, the human race will cease to breed.

No! there will be fewer children, they will be conceived deliberately at opportune periods, but they will be carried in their mothers' wombs with gladness and joy, they will be brought into the world with pleasure and hopeful expectation, and they will be brought up with care, zeal and love.

But, our opponents say, we will admit that the human race will not be extinguished, but, surely, you must admit that it will increase in numbers much more slowly than it does now. Yes, we admit that. But is this such a calamity? Is it really necessary that the human race should increase in *numbers* rapidly? In fact, is an

increase in numbers so very desirable? Is it at all desirable?

Ask yourself that question, if it never occurred to you before. Is there any greatness or any happiness in numbers alone? Is China with its more than four hundred millions any happier than we, who can boast of only ninety millions? And does China from any and every point of view amount to as much as does the United States, which has only about one-fifth of its population? And are we with our ninety millions any happier, or are we accomplishing any more (or even as much) in literature, in art, in science, in philosophy, in economics, in social welfare, in short, in everything that makes life worth living, than does Germany with her fifty millions or France with her forty millions? And would not any one of you prefer to be a citizen of Italy, or Norway, or Sweden, or the little Republic of Switzerland, which has fewer inhabitants than has New York City, than be a subject of the brutal, murderous Russian czar who reigns over one hundred and thirty millions? No! there is no honor, and there should be no pride in numbers merely.

Quality, Not Numbers, The Watchword

I prefer a commonwealth of five million people, all of them healthy and contented, all doing congenial work, all having work to do, all materially comfortable, all educated and cultured, all free to think and free to express their thoughts, with high ideals of a greater future and a higher humanity, to an empire or a republic of a hundred millions, all fighting, all struggling, all cutting each other's throats, all in fear of starvation, with senseless luxury on one hand and shameful poverty on the other, with killing idleness on one hand and killing overwork on the other, with bursting oversatiation on the one hand and exhausting starvation on the other; with millions tramping the streets and highways naked and hungry, with millions of human beings illiterate, held in the clutches of superstition, selfishness and brutishness; with thousands and thousands of imbeciles, criminals, perverts, grafters, prostitutes—female pros-

titutes who sell their bodies and male prostitutes who sell their minds, their ideas and convictions—I prefer, I say, the above-described small to the above-described larger commonwealth.

No, numbers alone, I repeat, do not count. With Spencer, I despise that vulgar conception which considers a large population, large territory, and big commerce as its highest ideal, its noblest aim. With Spencer, I would say that, instead of an immense amount of life of low type, I would far sooner see half the amount of life of a high type.

But I am not through yet, even with this side of the question. It is not even true that a diminution of the birth-rate would cause a proportionate diminution in the increase of the population. For there is one point which those who have not given the subject any study often leave out of consideration. The point is this: The infantile mortality-percentage increases with the increase of the birth-rate. If the mother has many children, she cannot attend to them as properly, nurse them as carefully as when she has but few. And, besides, exhausted by too frequent childbearing, her vitality is lower, and the child is born weaker and less able to fight the battle of life. Hence, the percentage of the children who die in families of many children is much higher than in the families with few children.

A Study of Death-Rates

As a rule, I do not give statistics, for statistics have often been abused, and statistics are often fallacious. In my addresses and writings I prefer to depend on my own arguments and on common sense. I have always maintained that, if common sense won't convince a person, statistics surely will not. But an interesting study on this point has recently been made, and I will permit myself just a few figures. The study was made by Dr. Alice Hamilton, was read before the American Academy of Medicine and is published in its *Bulletin* for May, 1910. Sixteen hundred families (1600) of wage earners were investigated, and the results are contained in the following table:

Deaths per 1000 Births in

Families of 4 children and less,	118
Families of 6 children and more,	267
Families of 7 children and more,	280
Families of 8 children and more,	291
Families of 9 children and more,	303

Dr. Hamilton sums up her results as follows: Our study of 1600 families of the poorer working class shows that child mortality increases proportionately as the number of children per family increases, until we have a death-rate in families of 8 children and over, which is *two and a half* times as great as that in families of 4 children and under.

In short, in families that have few children a much larger proportion remain alive, so that the balance is kept up fairly well.

There is still another point. A study by Prof. Theodate Smith, of Clark University, seems to show that very large families tend to be extinguished by the fourth or fifth generation.

So you see that even from the standpoint of the race-suicide alarmist excessive childbirth is not an unmitigated blessing and defeats its own object to a large extent. But in the meantime, it causes lots of suffering, lots of time-waste, lots of economic loss to parents, and deprives the surviving children of the proper chance. In short, excessive childbirth is a crime from every point of view: it is a crime, first and foremost, against the mother; it is a crime against the father, though he is himself the involuntary author of the crime; it is a crime against the first-born children; it is a crime against society.

The Parental Instinct

But our opponents are still not satisfied and they are apt to ask the following question, "Do you not admit that there *are* people without the parental instinct—people who, if they knew unfailing means of prevention, would shirk the responsibilities of parenthood altogether?" Yes, I admit that there are such people. But I will at once add that IT IS BETTER FOR THE RACE THAT SUCH PEOPLE SHOULD REMAIN CHILDLESS. Involuntary parenthood is not a lovely thing to contemplate,

and from the bottom of my heart I pity the children that are born into the world accidentally, against their parents' distinct wishes.

The Effect of Fear Upon Chastity

Another apparently formidable objection to the dissemination of the knowledge of anticonceptual measures is the fear of the effect that such knowledge would have on the virtue of our girls and even on married women.

You know there is a class of people that believes that we are all essentially wicked, and the only thing that restrains us from committing all the crimes on the calendar is the fear of consequences, the fear of punishment. The good people belonging to this class believe that the only thing that preserves the chastity of our unmarried women is the fear of pregnancy. The fear of breaking a certain commandment, they hold, is also a factor, but a minor one. Take away the fear of pregnancy, those good men and women say, and there will not be a chaste girl left. They will all rush headlong into never ending sexual orgies. I wonder whether those good, pious people judge others by themselves.

No, I do not believe that the mere taking away of the fear of pregnancy would undermine the chastity of our young girls. There are other and very important factors which keep the girls, under present social conditions, from giving themselves to men before marriage. A certain number of girls will go astray under any circumstances, are going astray *now*, in spite of the spectre of pregnancy and in spite of the terrible social ostracism that faces them.

But I will grant you that it is possible, that, after the knowledge of the prevention of conception has become common property, there will be an increase in what you call illicit sexual intercourse. Even if this should be the case, it would be preferable to the conditions that obtain now. It would be preferable that a girl or woman bent on illicit intercourse use a preventive than that she should haunt the offices of the abortionists, male and female; better than that they should

ruin their health or kill themselves with poisonous abortifacients; better than that they should end their existences with carbolic acid or by jumping into the river.

Illicit sexual intercourse is not such a heinous crime that its punishment must be Death. That is my opinion. If this opinion is immoral, heretical or treasonable, make the most of it.

The foregoing two are the really serious objections to the dissemination of anticonceptual knowledge.

Some Minor Objections

There are some minor objections. One is that, with such knowledge, married people will indulge to excess, thus ruining their constitutions. Here is again the same idea: that we abstain from moral crimes and physical sins only through fear of the consequences.

I stamp this medieval idea as false. Some people will commit sins, crimes and bestialities in spite of consequences; others will lead a healthy, moral, rational life just for its own sake, because they can't help being decent, because they have been brought up to be decent. And I am sure that when the study of sexual hygiene has become universal, when men know that excessive indulgence is injurious, they will abstain from it, the same as they abstain from excessive alcoholic indulgence or excessive eating. It is true, as Shaw says, that married life offers the maximum of temptation with the maximum of opportunity, but as the variety is lacking, things equalize themselves and the vast majority of married couples settle down after the first few months to a temperate existence, sexually speaking.

The other minor objection, which comes from the medical profession exclusively, is of such a character that I am actually ashamed to mention it. But for the sake of completeness we will have to include it.

Several physicians quite seriously objected to my agitation, on the ground that a diminished birth-rate would mean a very much diminished income for the medical profession. A great part of the income of many physicians is derived from confinements; and then it is not only the

confinements alone; infantile illness during the first two or three years constitutes quite an item. Said one doctor to me: "Mrs. X asked me to give her some remedy, as she had four children already. I told her I didn't know any, and last week I delivered her and got thirty dollars for the confinement. The same thing in the case of Mrs. N. From her I got fifty dollars for the confinement. And through the year I make on an average fifty dollars on each child I deliver. Where would we be without confinements?" I fully acknowledge the justice of this argument of my medical friends and, I confess, my inability to answer it. Perhaps the language in which I should answer this argument would not be quite parliamentary.

Then there is the theologic argument, the statement that our religion forbids the prevention of conception. While I do not know which commandment or which other divine injunction lays down the law as to prevention, still, I have nothing to reply to this argument. When theology comes in at the door, reason flies out of the window. You must never discuss any religious questions, unless you and your opponent are ready to discuss the very fundamentals of religion, the very origin and essence of religious faith. You know, faith has been defined as believing in something which your reason tells you can not be so, and with such a state of mind no profitable discussion is possible. The more absurd, the more impossible a belief will be shown to be, the more tenaciously will the person cling to it. So what is the use? We will, therefore, leave the theologic point of view out of the discussion.

I have considered every possible objection to my advocacy of the dissemination of the prevention-of-conception knowledge. Whether I have answered every point satisfactorily is a different question. But I have considered them all.

I asked my various opponents at various times, and they could find no other objections. I have secluded myself in my editorial sanctum and tried to think of any other objections which might enter the minds of some peculiar people, but could find none. I am therefore justified in thinking that I have considered every possible objection.

(To be continued)

[The arguments advanced by Dr. Robinson in support of his contention are strong and certain to call forth an animated discussion. This is as it should be, and we hope that the subject will be discussed earnestly and honestly. Our social and economic conditions are such as to cause serious apprehensions, in the mind of thinking men and women, concerning the future. We cannot say with the French king, "After us the deluge." As guardians of public health, as members of a profession which is in a great measure altruistic, we are obliged to consider the remedies that may be proposed for existing evils and to support those which we conceive to be right. Whether we agree with Dr. Robinson or not, he has at least something definite to say, he does not simply talk. His paper will be continued in the next number of CLINICAL MEDICINE, and you will want to read everything the doctor proposes. Read carefully, think and discuss deliberately and then write us your opinion if you want to—short and to the point.—ED.]

NO human being ever "found" happiness. Happiness just "happens," of course. It is a gift from nature. You can not make it, dig it up, pump it up, buy it, or cause it to appear by sleight of hand. The harder you run after it the faster it flees before you—like the end of the rainbow. Happiness always comes to you over your shoulder. And it comes most permanently and regularly to those who are trying to make others happy.—Frank Crane.

The New Therapy for the New Doctor

*An Address to Students of Rush Medical College**

By WILLIAM F. WAUGH, A. M., M. D., Chicago, Illinois

Dean and Professor of Therapeutics, Bennett Medical College, Chicago

I AM pleased to meet so many worthy representatives of Rush Medical College. I trust you will soon pass your final examinations and go out to your chosen fields of practice, and that there your careers may be such that your great Alma Mater shall be as proud of you as you are today of her.

You *are* proud of Rush, and well you may be, for she deserves it; and however honorable may be her newer University designation, it will be many a day before men forget the name or the glory of Rush Medical College. It was Rush that first raised the standard of western medicine, and she raised her flag so high that it became visible from the shores of the Atlantic, over and above the peaks of the Alleghanies.

And when we of the East first realized that a new center of medical science had been founded in the West, the same breezes that blew in with the news from the great lakes brought us the name of Daniel Brainerd. Daniel Brainerd was the first great surgeon developed in the Central Valley, the first of that long line of surgical colossi that culminated in Nicholas Senn and his worthy successor, Professor Bevan. Despite the swift progress surgery has made since those days, I am told by your class President that the work of Brainerd is still quoted in the lectures at Rush, as now given.

Why Brainerd Was Not Popular

It may surprise you to know that despite his great qualities Brainerd was not popular with all his Chicago colleagues. He was blamed with a certain disregard for the rights of other practitioners, a disposition to ruthless appropriation of their patients, that caused many a heart-burning. This same reproach has been made against so

many great surgeons that it seems as if the qualities that make a man preeminent in this department were inseparably connected with the disposition to grasp all the cases that come within his reach. But let us not attribute this to greed for the emoluments, but rather to the conviction that the patient is safer in his hands and that therefore the duty devolves upon himself of keeping the case there. But it is not in human nature for the other physician to take this view, and he simply looks upon it as a case of appropriating what he believes to be his own property.

Be this as it may—one day Brainerd was driving along a Chicago street, when he saw another doctor walking by, with whom he had had a run-in of this sort. Brainerd invited the doctor to a seat in his carriage, who, after some demur, accepted. In the course of the drive, Dr. Brainerd said: "Doctor, can you tell me why the physicians of Chicago detest me so heartily?" To which the other replied, "I don't know, unless it is because you are so damned mean!"

Minimizing the Value of Drugs

For the last quarter of a century we have witnessed a continuous effort to deprecate the use of drugs. Distinguished leaders of our profession have vied with each other in the effort to cast slurs upon drugs. The aim seems to have been to advocate anything and everything rather than drugs. Why this universal cry against our old standby? Were I asked what, after all, is the matter with the drugs, I should feel tempted to repeat the words of the indignant Chicagoan to Brainerd: "I do not know, unless it is because they are so damned mean!"

While all other departments of medical science have advanced, *materia medica* has stood still. Our drugs are what they were half a century ago—nauseous, uncertain, variable, ineffective. They cannot

*Given at a banquet served to the Rush students, in the building of The Clinic Publishing Company.

be employed effectively in the initial stages of diseases, because we cannot be sure of just what they will do or how much of it they will do. This makes the practitioner timid when he should be bold; cautious and temporizing when he should strike powerfully.

Disease may be compared to a riot. If a keen-witted, capable, and determined man strikes squarely at the root of the difficulty with well-aimed blow or well-timed jest, he breaks up the riot in its incipency and dissipates the danger. The temporizer waits till the trouble is fully developed, and when the fires are lit and the rioters running amuck, he calls out the troops and shoots into the crowd.

How the Reform Began

The modern reform of drug therapeutics began with Burggraave, Emeritus Professor of Surgery in the University of Ghent. His studies showed that the gist of the difficulty was the uncertainty of the drugs derived from plants. In these the active principles were developed irregularly, so that some preparations would prove strong, others weak; some would exert the expected influence, others exactly the contrary. He solved the difficulty by extracting these active principles, and applying each for just the powers it exerted.

In truth, this movement began with the therapeutic experimenters. Just as soon as men were no longer satisfied with the statement that a drug was useful in a disease, but asked when, why, and how it was useful, they began to try these agents and study their powers. This drove them to the active principles, for in no way could uniform and unvarying effects be produced except from uniform and unvarying agents.

The Results of This Reform

This study had one unexpected result, one that has completely revolutionized practice by altering the point for our therapeutic attack.

The study of the action of chemically pure drugs showed that they exerted their influence over certain functions of the living human body, elevating or depressing those functions affected by the drugs.

These were not remedies for diseases but for conditions, and it was up to the physician to study his patient and note the irregularity of function, then apply the remedy. One disorder of function might be present in many different diseases, and might require the same remedy in each. Thus, aconitine stimulates cardiac inhibition, atropine stimulates the capillary vasodilators, berberine contracts connective tissue, physostigmine stimulates peristalsis, and so on down the list.

One most desirable result of this change is to restore the physician to his true place; compelling him to study especially the patient himself, in the most important of laboratories, the clinical; to pore over the greatest of books, the book of Nature. Without saying or suggesting a word in deprecation of the laboratory investigations now so popular and so essential, they must in no way lead to the neglect of the study of the patient, of the morbid physiology of the living man.

The Three Essentials to the Modern Physician

Three things are essential to the modern physician, three duties devolve upon the scientific, conscientious practitioner, and these are: He must recognize in the patient the departure from healthy physiologic function. He must know what agencies can restore the disordered function to normal activity. He must administer just enough to restore exact physiological equilibrium.

To you, as beginners, this system of drug medication is especially important, because it makes your work as beginners so easy. You study disease analytically, beginning with the name and definition, working down through the history, pathology, morbid anatomy, symptoms, etiology, diagnosis, prognosis, course, terminations, and treatment. In practice you must work synthetically, beginning with a sick person who demands help. What the disease is, you may not know, and it may be weeks before you are able to name it. But you must not wait till then to begin treatment, for by that time it will be too late for effective intervention. The damage will have been done by the time your Widal is positive,

and it is not satisfactory to wait till then, to know what you might have done a week or so earlier.

To Correct Disordered Function

Employing the remedies for disordered functions, you have only to note a disorder of function to begin treatment. Your patient has fever, pain, vomiting, diarrhea, cough, convulsion, insomnia, and at once you have a sufficient reason for beginning treatment. Not that you confine yourself to treating symptoms—you look beyond the symptom for the pathologic conditions generating it.

Here we depart absolutely from the superficial observer. You have a gastropptosis to treat—but you know this to be impossible without relaxation of the connective-tissue supports of the stomach, and you give berberine. You find a headache, and this your investigation traces to eyestrain, nasopharyngeal disease, renal deficiency or fecal retention and toxemia. You treat the causal condition rather than its effects. You may know no more than that your patient has fever and that his pulse is too strong or too weak; yet, on this primitive observation you may begin an effective treatment, to give relief while you are pursuing further investigations. This is what makes the active-principle method so valuable to you as beginners.

To you, also, we look for the future progress of the medical art. Men learn while they are yet young. They receive new ideas while their brains are still plastic. In time their knowledge crystallizes, and progress ceases. The great Gross never admitted the specific difference between hard and soft chancres. Garretson rejected the germ-theory. When Harvey announced the circulation of the blood, not a solitary physician over forty-five years of age at the time admitted its truth. To the young we look for the reception of advanced thought.

The Alkaloidal Movement in America

When Burggraef advanced the alkaloidal idea, it was received favorably as

presented in medical-society papers, but made no headway in practice until he associated with himself a practical pharmacist. Chanteaud gave the profession a supply of perfected agents, uniform in quality, and at once the movement took bodily shape.

In America the commercial exploitation of the alkaloids and the active principles began with three professors in the College of Physicians and Surgeons, to wit, Professor Silva, now dead; Professor John E. Harper, still a member of that faculty; and Professor Thackeray, now an honored member of The Abbott Alkaloidal group. These three men organized the Metric Granule Company, which did good work in a pioneer way, but failed for lack of business ability. This gave one more instance of the rarity with which professional acumen is found joined with business talent. Their fine professional instinct was shown by the recognition by these men of the importance of the alkaloids; but it was not until Dr. W. C. Abbott took up the matter that the requisite business ability was conjoined. I am unable to find that any objection was made to Silva, Harper, and Thackeray engaging in this supply house; and in view of more recent occurrences, it would seem that objection lies, not so much to the supply of necessities to physicians, as to making such an enterprise successful.

I thank you, young gentlemen, for the attention you have given me; and I will ask you to bear away, as my parting admonition, that you will not accept my views as aught but material from which to construct your own. A child may take apart a costly toy to utilize the materials for one of his own construction, but the latter is better to him because it is his own, planned and executed by himself. In like manner, take the teachings you now receive as your crude supplies, out of which you may construct what you consider your very best means of treating the sick, of relieving human misery, and warding off the arrows of death.

Los Angeles Welcomes the American Medical Association

A Word Picture of the Beauties of the Southern California Metropolis

By **WALTER LINDLEY, M. D., LL. D., Los Angeles, California**

EDITORIAL NOTE.—The American Medical Association holds its annual session this year in Los Angeles, June 27-30. Other leading medical organizations will meet at the same time or just before the parent society. Something of the pleasure in store for those who attend is forecast in Dr. Lindley's article. The staff of CLINICAL MEDICINE will be well represented. Why cannot many of the readers of our journal join us? We should enjoy your society in the trip across the continent. Write us.

IT is difficult for a physician who has lived and practised in Los Angeles for thirty-six years to adopt the viewpoint of one who has never been here, and tell of the things in which he would be most interested.

Los Angeles is situated in a valley, with the Sierra Madre Mountains in view just a few miles to the east, and the Pacific Ocean twelve and fifteen miles to the west. In this valley, besides Los Angeles, are the beautiful city of Pasadena—nine miles away—and the seaside cities of Long Beach, Venice, and Santa Monica. Between these towns are orange groves, walnut groves and vineyards. Electric cars with ten- and fifteen-minute service connect all these places, and, in fact, you can get an electric car in front of your hotel in Los

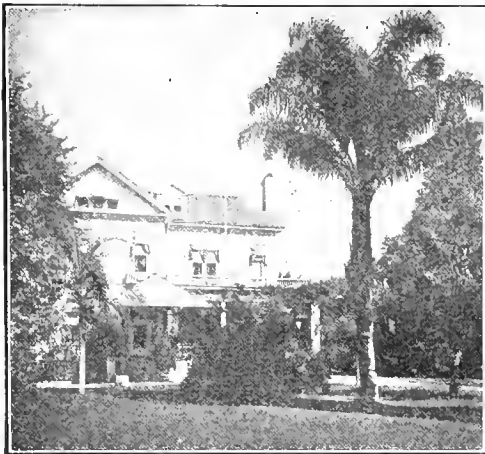
Angeles and be at the ocean in twenty minutes or be on top of a mountain in an hour.

The physicians and the citizens generally of Los Angeles feel that a great honor is being conferred upon us in giving Los Angeles the privilege of entertaining the American Medical Association, and from what I can learn of previous meetings, preparations for generous hospitality to all have never surpassed the arrangements now being made for this California session.

Monday, June 26, will be devoted to getting guests suitably located, and there will also be sessions of the Arizona Medical Society, of the American Academy of Medicine, the American Proctological Society, and of the American Medical Editor's Association. Several of these societies will have their own banquets on Monday evening, but the chief banquet will be that of the American Medical Editors' Association, which will be given at the Hotel Alexandria, and will be a very beautiful and elaborate affair.

Every physician, on arriving, will receive, as usual, a book giving the program and all the events, both scientific and social, and will also contain the coupons for every social function. Of course, the physicians of Los Angeles have nothing to do with the arrangements of the scientific program, but are devoting ourselves entirely to arranging for the social functions and for the various excursions.

There is an Executive Committee of Ladies, and a committee of one hundred ladies for information and general hospital-



Glimpse of tropical foliage. Home of Dr. W. Jarvis Barlow, Los Angeles, where garden party will be given

ity. The address of each one of these ladies will be in the telephone directory, which will be found in every room in every hotel. These ladies will be ready to answer the call of the wife or daughter of any physician who may be visiting here, and it will be their pleasure to do everything to make this visit delightful.

On Tuesday afternoon a tea will be given visiting ladies at the Alexandria. Seventy-five of our local ladies will be hostesses. This will be an opportunity for our wives

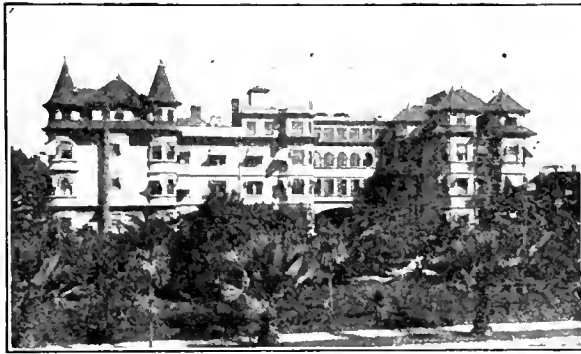
a brilliant affair, and will be followed by a ball that will last from 10:00 to 12:00 o'clock.

Thursday morning the visiting ladies will be given a rest, or if they desire, Los Angeles ladies will take them in small groups to seaside resorts.

Thursday afternoon, from 4:00 to 6:00 p. m., Dr. and Mrs. Norman Bridge will give an *al fresco* musical in the tropical gardens of their home in Chester Place. It is expected that the physicians as well as their wives and daughters will attend. Dr. Norman Bridge has a national reputation, and it will be a delight to himself and Mrs. Bridge to make their guests happy.

On Thursday evening, from 8:30 to 12:00 o'clock, there will be an informal smoker and vaudeville performance. While it is intended to please especially the gentlemen, yet if the ladies will pardon the smoke, they will all be made welcome, and they will find the occasion enjoyable.

It is thought that the scientific program will close on Thursday.



In the gardens of the California hospital, where members of A. M. A. will be welcomed

and daughters here to get acquainted with those from the East and give them such information as they may desire.

On Wednesday morning there will be an automobile trip for the ladies, with light refreshments at the Los Angeles Country Club, which is in charge of another committee of ladies. In the afternoon there will be a garden party on the beautiful grounds of Dr. and Mrs. W. Jarvis Barlow. This will be from 4 to 6:30 o'clock, and it is expected that not only the wives and daughters, but all of the visiting physicians will avail themselves of the hospitality of this delightful home. Dr. Barlow is dean of the Los Angeles College of Medicine of the University of California, and President of the Los Angeles County Medical Association.

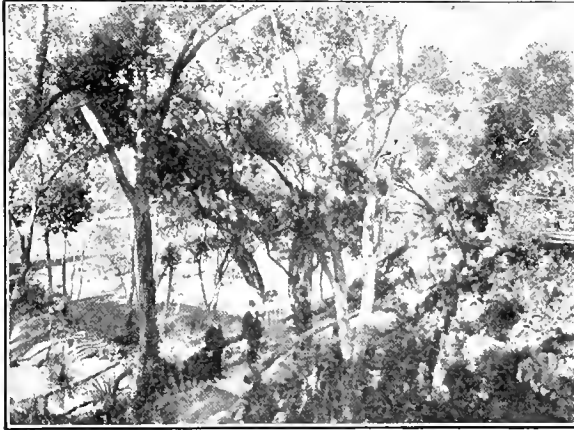
On Wednesday night the President's Reception will be given at the Shrine Auditorium. This will be in all respects



Residence of the Director of the California hospital

Friday the 30th, 11 a. m., automobiles will be furnished for all guests, both ladies and gentlemen, for a drive to and through Pasadena, and at noon they will be ushered into the magnificent sunken gardens, con-

sisting of 80 acres surrounding the winter home of Adolphus Busch. Here will be given, to the accompaniment of the best music that California can furnish, a *festin del jardin* (Spanish luncheon.) Mr. Busch has given orders to spare no expense.



Mr. and Mrs. Adolphus Busch on the grounds of their beautiful Pasadena winter home where *Festin del Jardin* (Spanish luncheon) will be served.

Beeves and sheep will be barbecued on the ground, and the leading Spanish dishes will be served *q. s.* This will all be served by waiters in Spanish costume. After the luncheon, lemonade and cigars will be served to the little groups that will be glad to remain listening to the music in this fairyland. Troubadours in Spanish costume will go from place to place singing to the music of guitars and mandolins.

Mr. Busch has also left orders that a number of acres of oranges and grapefruit be protected until this occasion and every guest will be privileged, after the luncheon, to pluck an orange for himself. It is thought that five thousand will be served on this occasion, but if there are more, they will not be neglected.

At three o'clock the scene is transferred to the Tournament Arena, where for an hour there will be Roman chariot races that will provide a few thrills even for doctors who may think they have gotten past the thrilling period. On January 1. of each year at Pasadena's Tournament of Roses

100,000 gather to see these races. At the conclusion, the visitors will be taken in the automobiles to their hotels in Los Angeles.

After dinner, special cars will be provided to take them to entertainments especially prepared for them at the beach cities, and they will be allowed to return home by midnight.

Saturday they will be taken 25 miles out at sea to Catalina Island, where a typical fish barbecue will be served.

Besides these formal functions, there will be many other entertainments and excursions. San Diego, Riverside, Redlands, and Santa Barbara are all clamoring for you.

A retired doctor at Uplands, a beautiful foothill town, thirty miles from Los Angeles, who has a large orange grove, writes to the Committee that he is going to keep ten acres of that grove especially

for the visiting doctors. He desires you all to come out and be his guests for the day.



Cozy corners waiting for you and yours at the Busch home

There are numerous other proffers of hospitality coming to the Committee, somewhat similar to this. Those who come to this meeting of the A. M. A. will get a more comprehensive idea of Southern California in five days than the man who comes alone can get in five weeks.

Appendicitis: Its Diagnosis and Treatment

By BENJAMIN H. BREAKSTONE, B. S., M. D. Chicago, Illinois

Professor of Clinical Surgery, Bennett Medical College; Consulting Surgeon, Cook County Hospital; Consulting Surgeon, Mary Thompson Hospital; Attending Surgeon, Jefferson Park Hospital

EDITORIAL NOTE. This paper continues and completes the article on "Appendicitis" begun in the April number of CLINICAL MEDICINE. It is a part of the interesting series on "Every-Day Surgery," which has been running in this journal for several months. The doctor discusses the surgical diseases in which the "every-day" man is most interested. Most of the operations described can be done by the general practitioner in his own office, under local anesthesia. Next month the subject to be discussed will be "Carbuncle." That article will be profusely illustrated.

Diagnosis Continued

TYPHOID FEVER.—A careful history will show the gradual onset, the step-ladder temperature, the characteristic tongue, the rather slow pulse as compared with temperature, the rose spots in the second week, and the Widal reaction, all of which are absent in appendicitis.

2. *Salpingitis and Oophoritis.*—Here, again, a careful history will show the previous endometritis and vaginitis, together with their causative factors. This condition most naturally occurs in women in the period between puberty and the menopause, whereas appendicitis may occur at any age. Besides, it is very often accompanied with no elevation of temperature and, unless rupture occurs, there is no leukocytosis. If the condition exists on the right side, it is extremely difficult to differentiate from appendicitis, especially of the chronic catarrhal type. However, the treatment is the same. There is, though, a relation to the menstrual period in the exacerbation of salpingitis and oophoritis, which is not frequently present in appendicitis.

3. *Gallstones.*—In gallstones, the pain is higher up on the right side, radiates over the right shoulder and down the right side, is accompanied with vomiting, as a rule, and as soon as the pain ceases, the patient is completely relieved, there remaining very little, if any, tenderness over the region of the gall-bladder. Here, again, a history, as regards previous attacks without tenderness following, will help us. This condition is not accompanied by a rise of temperature, and there may be jaundice during an attack,

especially if the stone is in the common duct. Besides, nearly every attack of gallstone is accompanied by a very slight chill and perspiration.

4. *Intestinal Obstruction.*—The gradual onset, the location of the tumor-mass, the indefinite tenderness, and the absence of fever are sufficient to differentiate this condition from appendicitis. There will also be tympany in the region proximal to obstruction; whereas over the obstruction proper dullness can be demonstrated.

5. *Extrauterine Pregnancy.*—If on the right side, this condition is differentiated from appendicitis by the absence of a distinct point of tenderness; by the disturbance of the menstrual period, the absence of fever, and, if rupture takes place, the resulting collapse which follows it.

6. *Tuberculous Peritonitis.*—The writer has seen, within the last six years, a number of cases of tuberculous peritonitis which have been diagnosed as appendicitis. After a careful study of these cases, the following points have been noted:

1. They occur to a very large extent in young adults who are anemic and very much below par.

2. The onset has not been sudden.

3. The symptoms have not been severe; that is to say, with a high temperature and a very rapid pulse, with the abdomen greatly distended, and with great rigidity of the recti muscles, the patient as a rule did not appear to be as ill as the symptoms would indicate. The writer has seen these patients able to get out of bed and walk to the ambulance, a thing which would be accompanied by the most excruciating pain

and greatest discomfort were these symptoms due to appendicitis.

On opening the abdomen in these patients, a large amount of fluid is found, and more or less honey-combed adhesions all through the peritoneum, varying in extent with the severity of the case. The parietal peritoneum as well as the great omentum will be studded with tubercles.

7. *Carcinoma of the Pylorus*.—In its early stages, pyloric carcinoma very often is mistaken for appendicitis; that is to say, in patients about middle age, who have a dilated stomach, very often the earliest symptoms of carcinoma of the pylorus resemble very closely those of appendicitis. However, if a careful gastric analysis be made, and together with the absence of a definite area of tenderness at McBurney's point, absence of fever, in addition to the gradual onset and other well-known signs, appendicitis may be excluded.

8. *Sarcoma of the Cecum or Ileum*.—This condition is very difficult to differentiate from appendicitis. However, if we watch our case for some time, we shall find that, if it is sarcoma, there will soon be a mass in the right iliac fossa, hard, non-fluctuating, devoid of great tenderness, with absence of rigidity. In the early stages, the diagnosis is most usually made at the time of operation.

9. *Typhlitis and Paratyphlitis*.—Typhlitic and paratyphlitic inflammation is present to a greater or lesser degree in practically every form of appendicitis and therefore does not play a very important role in the diagnosis, as both states lead to or result from appendicitis, and an appendectomy is indicated.

10. *Hernia*.—The only kind of hernia that can seriously be mistaken for appendicitis is of the incarcerated inguinal variety. However, with an accurate history of the case, and the absence of the characteristic tenderness and rigidity, appendicitis may be excluded.

11. *Hysteria*.—The most frequent mimic of appendicitis, especially of the chronic catarrhal variety, occurring in girls, especially in the period of adolescence, is the result of hysteria. In fact, the average young girl complaining of an

occasional pain in the right iliac fossa runs a great risk of having her appendix removed if she consults a surgeon for advice. The writer has seen many cases where appendectomy has failed to relieve this condition; he has observed many patients of this kind who have had their appendix removed, then were operated upon for supposed adhesions, and then were further operated upon for other supposititious conditions, and, still, were not relieved.

It is cases of this kind that require careful observation, and it will often be found that in connection with the so-called attacks of pain in the right iliac fossa there is no increase of temperature. The patient is found able to go about her usual occupation if caught unawares. There is no fever, while there are present all of the classical symptoms of hysteria, such as corneal anesthesia, pharyngeal anesthesia, and Charcot's tripod.

12. *Simulated Appendicitis as a Prodromal of Scarlet-fever*.—It has frequently been observed that a physician is called to a patient presenting the typical symptoms of acute appendicitis, especially in children, and, then, when he calls the following day he finds the typical scarlet-fever rash, sore throat, and so forth.

The writer has not been able to find very much on this subject in the literature, but he has very frequently observed that scarlet-fever, instead of with the regulation chill and vomiting, occasionally begins with the characteristic symptoms of an acute appendicitis. However, the following day the appearance of the rash and the other symptoms of scarlet-fever will clear up the diagnosis. In this connection, I am reminded of an instance where I was called to a certain hospital in Chicago, to operate for appendicitis, the patient being all prepared for the operation. But, lo and behold, on examining the patient, I found him to be covered with a scarlet rash, and I also observed all the ordinary symptoms of acute scarlatina. It was remarkable, in this instance, to note that, while the patient had been in the hospital for several days, neither the internes nor the nurses had discovered any of the symptoms of scarlet-fever this patient displayed.

This experience goes to show that in children the onset of scarlet-fever very often may closely simulate a characteristic attack of appendicitis. It may also be noted here that scarcely any of the children in whom these symptoms have occurred, on recovering from scarlet-fever, have exhibited any further symptoms of appendiceal trouble.

The Prognosis in Appendicitis

A great deal may be written about the prognosis in appendicitis. We can, of course very often prevent appendicitis much easier than we can cure it; and in this connection I may say I think it is advisable to remove the appendix whenever the abdomen is opened, especially should this be done if the appendix is handled in any laparotomy. There are many instances where individuals have one or two attacks of acute appendicitis and thereafter have no more trouble for the rest of their lives. In these cases, of course, complete resolution has taken place; and it is these cases that have given encouragement for medical treatment. The writer has seen patients with acute suppurative appendicitis treated by Christian science, where the patient has had his three meals a day for ten days, and where the abdomen was distended to the utmost with pus, and yet they recovered after opening up the abdomen, because the abscess was walled off. There are also many patients who presumably have no pain and do not feel especially distressed, and, yet, when the abdomen was opened, the appendix was found gangrenous and imbedded in a pocket of pus. Some of these patients have not been operated upon and have died of septicemia from absorption of septic material, or eventually developed peritonitis.

It, therefore, behooves the physician to be very guarded about the prognosis in any particular case of appendicitis, as we can only determine the character as the case proceeds, and we do not know beforehand whether a certain acute appendicitis will become suppurative, gangrenous or develop into any other variety; and while we are waiting we are losing valuable time. Thus it is the wisest thing, upon the definite

diagnosis of appendicitis, to advise operation for its cure, at once.

The Treatment of Appendicitis

The treatment of appendicitis may be divided into the medical and surgical.

Very little need be said about medical treatment, as it is now the consensus of opinion that, as soon as a positive diagnosis is made, the appendix should be removed. However, in a case of acute suppurative or gangrenous appendicitis where the appendix has ruptured and there is an accompanying peritonitis (that is, if the patient has been allowed to go on without a recognized appendicitis until the condition just described has occurred), then the Ochsner treatment is advisable.

I fear that, in this matter, Dr. Ochsner has been greatly misunderstood. He never meant that the treatment he outlined for cases of appendicitis that have lasted several days and are then accompanied by peritonitis should be applied in every instance. I believe that he really meant—and in this I agree with him to a very large extent—that in such cases it is advisable to wait until the patient is in a better physical condition before operating; and his treatment as outlined—that is, starvation, colonic flushings, and opiates to prevent peristalsis—are for the purpose of localizing the inflammatory process, so that in men the pus may be evacuated through the ordinary appendiceal incision, while in women it will be more convenient to evacuate this local abscess through the posterior cul-de-sac.

The Surgical Procedure

Not very much more is to be said about the surgical technic, which is amply described in most of the textbooks on surgery. I only wish to emphasize a few little points in the method.

I believe the best results follow a rather small incision along the external border of the rectus muscle, as shown in Figure 1. Yet, while a great many operators pride themselves on the very small incision through which they can remove an appendix, I am convinced that it is not wise to have the incision so small that one can

only feel but not see the parts within the abdomen.

There can be only one excuse for an extremely small incision, and that is for the removal either of a normal or else of a chronic catarrhal appendix known to be nonadherent to any of the surrounding structures. I have seen as many, if not more, adhesions follow operations per-

In order to prevent adhesions, it is necessary that as little ragged edges and knots of catgut be exposed as possible. I believe that this is best accomplished by using buried purse-string sutures of the finest catgut, and in inverting the end, as shown in Figures 2 and 3. This should be done twice, and when completed, the stump that remains is just a bare slit



Fig. 1. Anesthetizing the line of incision

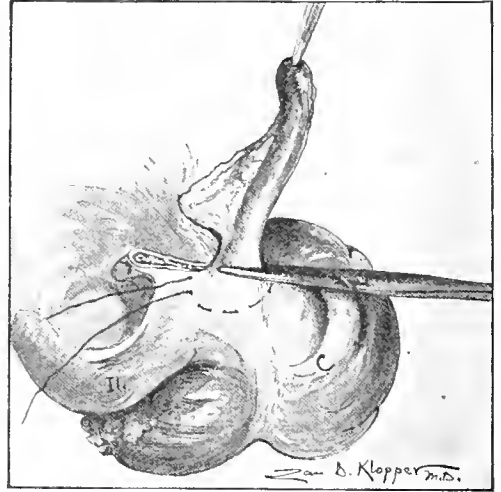


Fig. 2. Purse-string suture in place

formed with a too small incision as after operations performed with a too large incision.

When we open up the abdomen, we should not be satisfied merely to remove the appendix by the feel of the finger, but there is presented a good opportunity to inspect and palpate the adjacent organs, and if these are found diseased, they can then be removed. Especially is this true in women, and I daresay the percentage of women operated upon for a supposed appendicitis but who find no relief from their symptoms is quite large.

Prevention of Adhesions

After opening the abdomen and finding the appendix, it is wise that every precaution be taken so that adhesions may not occur after the operation, for it is prevention rather than cure that must be our slogan, if we wish to benefit our patients most.

about one thirty-second of an inch wide. The next thing to do to prevent adhesions is to cover over the cut end of the meso-appendix with the remaining part of the meso-appendix, as shown in Figure IV.

Another point in the technic is to sew each layer of tissues separately, on closing up the wound. Just before the peritoneum is closed, it is a good thing to pour some normal salt solution into the peritoneal cavity. This has a manifold purpose. First, it stimulates the patient, makes him breathe very much better, and raises the pulse. Secondly, it shows whether there is any hemorrhage in the abdominal cavity, as the solution will be colored red if such is the case. Thirdly, it expels the air that has gained entrance into the peritoneal cavity during the operation.

As to Postoperative Hernia

Another point in the closing of the abdominal wound is the prevention of post-

operative hernia, and this is accomplished by putting in several catgut sutures uniting the rectus muscle with the oblique muscles, as has been so ably emphasized by the late Byron Robinson.

Now, in well-selected cases, this operation may be done under local anesthesia. In cases where you are sure that the appendix is not adherent, when the disease is of a chronic catarrhal type, and if the wall of the abdomen is not full of adipose tissue, then such is an ideal case for the use of local anesthesia.

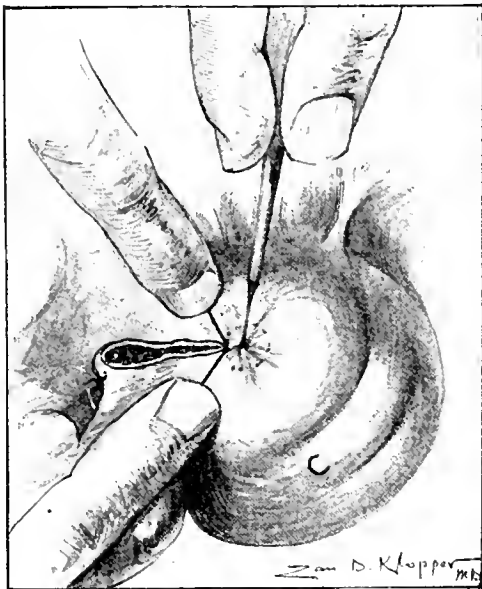


Fig. 3. Appendix removed, stump turned in and suture being tied.

The solution used should be introduced along the line of the proposed incision, as shown in Figure 1.

The Aftertreatment

The aftertreatment, in cases where there was no free pus and the abdominal wound is closed up, is very simple and consists largely in letting the patient alone. The first day, of course, after the operation, if the patient has not vomited from the

anesthetic, he may be given a liquid diet. The fourth day we begin to move his bowels with calomel, 1-10 grain doses every hour, for six hours, followed by magnesium sulphate, 1-2 ounce, in the morning.

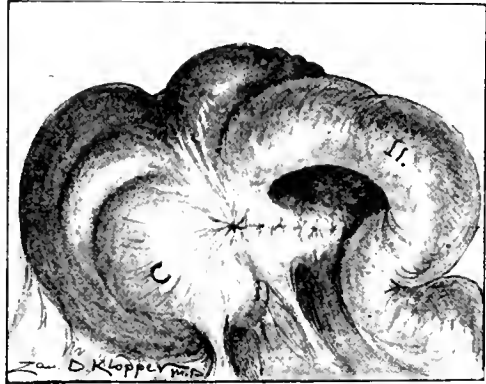


Fig. 4. Wound in gut is closed

If the patient experiences very much pain after the operation, an ice-bag should be applied; if this does not give relief, then it is proper to administer, hypodermically, 1-4 grain of morphine sulphate. It is rarely necessary to repeat this dose.

The wound should not be dressed until the stitches are removed from the skin, which is the ninth or tenth day, after which the wound is painted with tincture of iodine and another dry dressing is applied, when the patient may safely go home. If the operation was done under local anesthesia, the patient may without risk get out of bed in four or five days, the wound being dressed as described before.

Of course, in a suppurative or gangrenous appendicitis, a drainage-tube being used, the wound naturally requires more frequent dressing, until the tube is removed, which is done when discharge ceases and the temperature is down quite to normal.

At the end of the fourth or fifth day after operation the patient may be given a light diet, which is advanced to a full diet several days after that.



When I Was a Pioneer

One Young Doctor's Experiences in the Early Days in Idaho

By **CHARLES STUART MOODY, M. D., Sandpoint, Idaho**

In the days when I was hard up for the want of food and fire,
When I used to tie my clothes up with little bits of wire.

THE above little classic from the folk songs of the West is highly indicative of the financial condition of many a youth in that country, twenty-five years ago, who set out upon life's journey with the idea of doing something more than "punching" cattle or holding the leading strings over two span of unruly cayuses attached to a freight wagon.

Life is made up of little things, startling but true. No person can recognize more fully than myself the trivialities that will go to make up the burthen of this sketch; yet, I am interested in the life of my fellow colaborers. Then why should they not be interested in mine? An old-fashioned experience meeting, where each should arise and relate his experiences in the vineyard, would be a symposium of personal reminiscences that would be to me priceless. Now, for instance, if Brother Abbott or Father Epstein would come forward and tell us how they did it, I should value the magazine containing that article above all other numbers, and promise to treasure it among my literary lares and penates.

There will be a fellow feeling established between me and the fellows who were in my financial class (and I trow there are not a few), and the fellow who was fed all his life from the horn of plenty will have an interest in knowing how "the other side" managed. True, he may have a fine scorn for the man without money trying to attain the "heights by great men reached and kept," but, nevertheless, he will read through this sketch in order to find out just how it was done.

You will doubtless infer from this preamble that I was one of the unfortunates who never even had a glimpse of the tying strings of the purse of Fortunatus. The inference will be exactly correct. Your

surmise does not miss the truth by so much as the shadow of a hair.

It is an extremely unfortunate thing that poverty-ridden people should be endowed either with brains or ambition. They should be content to occupy the station God created for them.

I can remember thinking such thoughts as the above when I was quite a lad. You see, pessimism had grabbed me and was holding me fast. It took me some years to shake it off, and even today when I see something that appeals to my idea of the unfitness of things it comes back.

The Medic Instinct Cropped Out Early

I really don't remember when I resolved to become a physician. It must have been quite early, for mother says that I always enjoyed killing things. She thinks that was one of the early symptoms.

I want to pause right here and state that the old lady has no hidden or uncertain meaning in the foregoing remark. Nor does it apply to the profession as a whole. I am not so sure about the murderous impulse—I cannot remember that I terminated the existence of more than the usual number of frogs, garter-snakes and field-mice. Every boy passes through the destructive stage, and I hold myself neither worse nor better than the average. The only difference was that I had a sort of curiosity of how the things were made and what made them go; I had that same curiosity about my playthings. I had to find out what "made the wheels go round."

That same troublesome spirit of investigation got me into trouble with my Sunday-school teacher more than once, and I cannot recall now that I ever received any rewards of merit consisting of a certain number of diminutive cards with illuminated scripture texts, the same to be treasured until a certain number had accumulated when they could be exchanged for one a little

larger, this larger one to be augmented in like manner until the culminating reward was a small cloth-bound Bible worth, I should say, about fifteen cents. If I ever did get one or more of these tokens of pristine morality I probably traded them with good little boys who delighted in such things, for bird's eggs or overripe toads that I proceeded to lay under tribute to science.

It was about the same way in the public school held in a log schoolhouse with cracks between the logs large enough to permit the simple physical experiment of kicking a cat through, the same being kept by a red-headed school ma'am named Parker, where I absorbed the greater part of my education. If Miss Parker (she's married now) ever caught me at work on my arithmetic or grammar, it was an accident and I faithfully promised that it should never occur again.

But the old physiology (did any of you ever see those old school textbooks on physiology with a red, yellow and blue emasculated figure of a human being on the front page, that resembled the anatomy of the human form divine about as much as I resemble the Apollo of the Beveled Ear?) that was my pride and delight. I knew all about the effect upon the various organs, of alcohol, tobacco, tabasco sauce, Worcestershire, oyster cocktails, and sundry other popular dissipations. I could stand up and paint with most terrifying effect what a man's innards looked like after he had absorbed three gills of C_2H_5OH , "on the cold, gray dawn of the morning after." I could make shivers chase up and down the vertebra of the girls in the school when I told them how a cigarette would make them lose their manhood—oh, hold on, I didn't mean that exactly. Well, anyway, I got that old green-backed monstrosity until I had its every unverified statement by heart from "kiver t' kiver." Believed it all, too. Why shouldn't I? The fellow that wrote it (or was it a fellowess?) had several learned cabalistic letters behind his name, ranging all the way from D. D. down to M. U. D.

When in the course of time Miss Parker turned me out of her knowledge factory and informed me that I had reached the

limit of her capabilities in the educational line, I imagined that I was old man Gray, Austin Flint, Roberts Bartholow, and Paracelsus rolled into one lanky chunk of country boy. That I got the conceit taken out of me is another matter entirely.

And So I Became a Teacher

I must have hypnotized the County Superintendent of Schools for the county in which I lived at that time, for after writing an examination on a few branches that I understood and about a dozen that I knew nothing about, he granted me a certificate to teach school. I want you to keep in mind that that certificate said "teach." Just how I was to teach it did not state, and I spent several months trying to find out. If it had said "keep," I might have understood it better and should doubtless have lived up to the letter of its wording more fully. I don't care. I got the money—it was thirty-five dollars per month—and as I am alive today, it argues that the directors did not assassinate me, as I have since strongly suspected I deserved.

All the time I was wearing out that certificate to teach I was dreaming rosy-hued dreams of a time when I should tread the classic halls of some medical college, with the lamp of great medical learning burning brightly on my alabaster brow. It may have burned later, but let me confess that its light was so dim that my professors never caught sight of it—they were all so short-sighted.

The only man who ever saw anything in me—and God only knows what that was—was good old Doctor Watkins in Moscow, Idaho. He told an uncle of mine, one day, that that boy had a bucketful of brains. I reminded uncle that the doctor was careful not to specify the size of the bucket. There are different sizes of buckets, you know, and I've always been at some loss to know just what size the good doctor had in mind. In all my years of association with him after that I never could summon up courage enough to ask him. Perhaps it is just as well that I didn't.

Then Good Doctor Watkins Took Me in Tow

At any rate, the doctor had enough confidence in me to permit me to infest his

office and grind over Gray until I could actually tell the os calcis from the femur without half trying. He managed to teach me the difference between H_2O and HNO_3 so that I could distinguish the difference by tasting them. There were several other anatomical, physiological and chemical facts that I learned, too, but the principal one was that I needed a wife. I have never been quite sure whether the impulse to mate was physiological, anatomical or chemical, but whichever it was, I got her. Let me admit right here, that, while I have many things in my past that I regret, getting her is not among them. Thrice blessed is he who hath a good wife.

I developed quite extraordinary powers as a hypnotist. The more extraordinary, in that I did it unconsciously. I hypnotized the examining board at medical college into admitting me on my good looks—that is, I suppose it must have been that, for I am pretty certain that the credentials I presented were not sufficient. Say, if that bunch had put me up against Euclid or Caesar, I should have been hunting a comfortable-looking box-car back west.

The good old Secretary put on his pince-nez, looked over my documents and remarked, "Why, bless me, you are almost a doctor already." That's right where he was right. I *was*, not "almost", but quite. I had my own private graveyard down on the Nez Percés Reservation, and it was as well populated, considering the length of time I had been working on it as compared with his own. His was a little more elaborate, however, it had more marble monuments and weeping-willows over the graves than mine.

If I ever displayed any great erudition while in college, the faculty forgot to mention the fact in my grades at grad. That didn't matter very much, though—I was glad enough to get through even though it were by the skin of my teeth.

Just as soon as I laid my hands on that sheepskin (made out of paper) I "hiked" back to the big woods. The effete East may be all right for you fellows that are acclimated, inoculated, or whatever process it takes to make a man fit to live there.

But for me—give me the great old hills covered with their cloaks of pine; the rolling bunch-grass prairies where the cunning little coyotes prance around and pick huckleberries; the wide, deep lakes, where the sunlight shimmers and dances, and the large variegated mosquitoes hum their evening song, lulling you to slumber soft as the rest of babes. Give me the land of chaps and boiled shirts, of Piper Heidsick, tobacco and "redeye," give me the land of "stagged" pants and caulked boots, of men who chew Peerless and spit through their teeth. None of your land of pink teas and cotillion favors, of Turkish cigarettes and fizz-water. I am used to the land where your friend slaps you on the back and yells, "Hello bucko, come an' have a drink;" the same man who will call you "Doc" and curse you black, but who will lay down his life for you if need be.

Sheepskin Won, I Return to My Copper-hued Friends

My Nez Percés friends—what was left of them—were waiting me when I stepped off the train on the Reservation with my brand-new dignity tucked under my arm. It was good to be back. In those four years I had seen so much sham, so much hypocrisy, so much shabby gentility trying to imitate wealth, that a look at the good honest faces of my red brethren was like a sight of cool water to the desert-parched traveler. The grasp of their honest hands had the feel of true worth, after the limp salutation of lily-white hands of those who might hide their feelings behind the smiling mask of craft but could not train their hands to conceal their shallowness.

I have a sneaking sort of pity for you fellows that enjoy a city practice, upon my soul, I have. You miss so much. Hemmed in by a city's walls, you never get to see the open places where God's sunlight shines, the sweep of rolling prairie or the rise of tree-clad hills. Of course, I admit that it is almighty fine to crank up your buzz-wagon in the morning and spin around town making your calls. But what is that to compare with cranking a forty-pound Cheyenne saddle on a dun-colored cayuse with a glass eye and "forking" him

over fifty miles of mountain trail for the exquisite pleasure of assisting some maternally inclined lady to increase the seldom population of the country?

I tell you there is nothing like being a pioneer. You miss the swell functions and neurasthenic patients, but, then, you more than make it up in an appetite for bacon and beans and experience in the good old-fashioned maladies like our mothers used to have. There is a certain *éclat* about being hustled out at 3 a. m. on a rainy night to ride fifteen miles for a baby with the colic, only to find the baby sound asleep when you arrive.

A Backwoods Medic's Encounter With Smallpox

One of my pioneer experiences is worth relating, if for no other reason than to illustrate what the backwoods medic has to encounter. I was surgeon to a railroad-construction outfit, one time. Some thirty miles up the river was a grading camp that was so isolated that I secured a pharmacist, who was employed in getting out some timber, to look after the minor ailments. I had not seen the camp for four weeks, when one evening, just at dusk, the foreman, a mammoth Scotchman, showed up at the base hospital with the intelligence that the men were all down with the measles and some of them pretty sick.

Now, measles, in your practice, may not be a very dangerous complaint, but take it among the crowd of men living under the conditions that obtain in a grading camp and it becomes something to be handled with skill. I lost no time in getting out my horse. We traveled all night, reaching the camp just at daybreak. The sick men were all in a rude log shack that stood on the river shore. I walked in, lighted a candle and took a look around me. There lay fourteen men in various stages of smallpox. My druggist friend had made a mistake in diagnosis; but, then, I excused him, for he was one of the fourteen. I turned to the foreman and asked, "Have you had the smallpox?"

"Hoot mon, no," was his reply.

"Well, get out of here then, for these men all have it."

The expedition with which that foreman vacated was beautiful to contemplate.

I had to get those men down the river where I could attend them. Not a one in that camp could I get to aid me. In fact, by the time the news got around there were not enough left in the camp to form a corporal's guard. Why didn't I quarantine them, you ask? Now, that would be an easy matter, wouldn't it? Me alone with sixty or seventy bull-necked railroad navvies—no, thank you, I was not quarantine officer just then.

On the river bank lay a great freight barge, capable of holding several tons. My knowledge of the river was nil plus nothing, still, those sick men had to be transported. I loaded them into the barge, much against their protests, and shoved her off from the shore. The navigation of a western river has no semblance to sculling a rowboat in a canal, bear that in mind, please. The rivers of the West are given to tearing along at a rate of speed that makes a fellow catch his breath in short pants.

Perched in the stern with a long steering sweep in my hands I imagined myself another Charon and the rolling waters of the Kootenai an Idaho Styx. Just what my cargo considered themselves, whether shades or not, I did not stop to learn. Anyhow, I am pretty certain that after we had shipped several hogsheads of water going through the first rapid they might have voted themselves shades of several varieties.

The voyage from Camp 3, where I took on my freight, down to the base hospital was devoid of incident. As I approached the hospital my eagle eye detected the head push of the whole works sitting on his horse awaiting my arrival. No sooner had I turned the prow of my ferry into the shore than he began to upbraid me for allowing the men to escape from Camp 3, asserting in no uncertain terms that the men did not have smallpox. I listened with as much patience as nature has endowed me with until he was entirely through. The conversation took place at some distance from the boat and was more strenuous than prolonged. After he had blown off all his surplus steam I took him gently but firmly by the arm and steered him

toward the boat, saying in my most dulcet tones:

"Mr. Wren, if those men have not the smallpox, of course you will have no objection to assisting me to get them to land. Several of them cannot walk, so we shall have to carry them."

Mr. Wren caught sight of one bloated, pustulated face blinking at him over the gunwale, then turned and precipitately fled.

I had the smallpox.

I also lost my job. Wren could not forgive me.

I came away.

The country had lost its old-time charm. The advent of the railroad brought a new type of people; the Indians with whom I had associated for so long were crowded into the background, they could not accustom themselves to the new order any more than could I. They retired to their allotments and seldom came to town. When you met one, he had a sad look on his face as though he were looking for something forever gone. The something was forever gone—it was the old-time peace and quiet.

It was with sad heart we bade our red friends farewell and boarded the stubby little train that crept, rather than ran, over the new-laid rails down the silver winding river. I fear me that tears stood in our eyes as we watched the bright water fade from sight. It was like leaving an old and dear companion.

Then Came Sandpoint

Sandpoint was then a new town (it is not aged yet) and everything was bustle and confusion. It was a town of shacks and even tents. For years the country had lain fallow awaiting the advent of the logger. The logger came, and the giant forests began to fall before his tread. What attracted us most was the lake. As we rolled out upon the long bridge that spans its waters a March sun shot through a mass of cloud and set the waters shimmering and dancing. Our eyes drank in the broad, placid water girt round with towering snow-capped mountains, their sides dark with evergreen. Emerald islands dotted the surface of the lake and deep bays

indented its shores. It was (and still is) a delightful place. Wisdom—my good wife—declared that here would we rest.

But the rest was not all that could be desired for the next few weeks while the sun was creeping back northward warming the landscape as he came. It was cold, colder than the equable climate we had been accustomed to, and the hotel was practically fireless. There was a fire in the bar-room, also there were several dozen "lumber-jacks" in a more or less (generally more) inebriated condition. Had Wisdom been musically inclined I fear that her repertoire had been augmented by the addition of several ribald logging songs that came tearing up through the thin board flooring into our room from the bar-room below. Luckily the little lady cannot tell "Jesus, Lover of My Soul" from "Annie Rooney," so she escaped.

Here is Another Episode in Camp

Upon what trivial things, sometimes, does man's success or failure depend. One episode insured my success with the rough element among whom I chose to cast my lot. I have often thought that had I failed to take advantage of it my failure here had been equally assured.

It was "breaking up" when we came, the snow was melting, the level ground surrounding the lake one sheet of muddy water from three inches to two feet deep. Below the water the mud was bottomless. One evening, just before dusk, a "lumberjack" rode up to the office, his horse covered with water and mud, and asked me if I would go to Palmer's Camp—a man was hurt.

"How far is Palmer's Camp?" I asked.

"Bout 'leven mile," was the reply.

"How can I reach it?"

"Might ride or you might take a buggy, it'll be hard gettin' through Odin slough, though."

"I will take the rig if you will guide me."

"Shore thing. That's what I come fr."

I ordered out the team and we started. Night closed down darker than the proverbial stack of black cats. The horses plodded through the slush making slow time. Finally we floundered through Odin slough without mishap. Ten feet across

it we ran into a stump in the dark and demolished the buggy. My guide had left his horse in the livery stable and there was nothing left to do but walk, six miles through the dark and in water up to our ankles. The "lumberjack" exploded a few volleys of cuss words and we sat out.

"How are you on the hike, pardner?" he asked.

"Keep right on 'hiking' and find out," I replied.

He sank into silence and strung out up that road, churning the water with his brogans like a paddle-wheel river steamer. I tucked my head down and after him, keeping right at his heels. I may as well pause here and tell that it was raining. I thought that journey never would come to an end. I was too blamed proud to ask how much further it was, but nevertheless welcomed a ray of light that betokened our journey's end.

My guide stalked into the "bunk-house" where some thirty "lumberjacks" were seated about a huge circular stove, and his first greeting was:

"Boys, that g—d—d sawbones 'most walked the infernal legs off of me."

My patient had been scalped—literally scalped—by a falling tree. The skin was cut as clean from his head as though it had been done with a knife and lay in a great roll upon his neck behind. It was covered with bits of bark and sawdust.

You fellows who have all the modern methods of fighting "bugs" would fall dead if you knew how I managed to sterilize instruments and dressings for that case. Suffice it to say, the cook's coppers came in for their share.

The victim lay in his "bunk," smoking Peerless about as unconcerned as any person there. I laid him on a bench, covered the bench with the cleanest blanket I could find, and proceeded to scrub that skin and cranium with soap until it resembled a half-tanned deer hide, by the time I had completed my task. Through all this the fellow lay there and "joshed" about the shampoo he was getting. Modesty forbids my telling what a fine job I did on that scalp, but candor forces me to admit that the fellow got well.

My election and peace calling among the "lumber jacks" was secure from that day forward. They voted me an honorary member of their fraternity and entitled to all its rights and privileges, among which was the right to be invited to "take something" every time one of them saw me on the street. In consequence, whenever there are any number of them in town I keep off the streets.

Their First Baby

An amusing thing happened the first summer I was in Sandpoint. Below town, some five miles, was a small saw-mill, owned by Mr. Smith. That was not his name, however. Mrs. Smith presented her lord with an heir, the advent of which I was pleased to assist. All things were lovely. Mrs. Smith was fine and the youthful Smith thriving. Something like a week after the arrival a messenger dashed up to my door, mounted on one of Mr. Smith's Kentucky trotters, the horse covered with foam and panting like an engine.

"Hurry, Doc," he cried. "Git on this horse and git down there like hell was after you. Jack's baby's dyin'."

"What's the matter with the baby, Fred? He was alright the other day."

"Oh, hell, I don't know. Jack said he was dyin' an' f'r you t' come right away."

Without further colloquy I grabbed my case, slung it over my shoulder, mounted the horse and simply burned up the ground getting down there.

When I arrived Jack was pacing up and down in front of the door wringing his hands. I piled off the horse and grabbed Jack by the shoulder, shook him out of his trance and yelled:

"Jack, what in the name of all the devils is the matter with that kid?"

"Oh, I don't know, Doc. Go right on in and see what you can do."

I hurried into the house to find Mrs. Smith sitting up in bed crying. I glanced toward the crib where the young man lay and found him sound asleep.

About that time Jack came in. I looked up from my inspection of his heir and asked:

"Now see here, Jack, you tell me what is the matter with this baby—what's all this hullabaloo about!"

"I don't know, Doc, but that baby sleeps all the time."

"Well, what in the name of the great hornspoon do you expect him to do, yell all the time?"

Jack has been father to several babies since that time, and I often wonder if he does not wish that some of them would sleep "all the time," like the first one.

Such is life in the far West. A country lacking in many of the refinements of civilization, but a country for all that are virile and filled with red blood.

Mistakes

III. Gastralgia or Indigestion?

By **CURRAN POPE, M. D., Louisville, Kentucky**

Ex-Professor of Physiotherapy, University of Louisville; Medical Superintendent of the Pope Sanitarium; Member of the American Medical Association, etc.

EDITORIAL NOTE.—This paper is part of a series of articles upon the common mistakes made in practice. They emphasize the necessity for the utmost care in diagnosis, and show how much such care may contribute to clinical success. Every physician should read them carefully.

NOT so many years ago a gentleman walked into my consulting office, asking, "Doctor, can you cure gastralgia?" My reply was cautious; that I was unable to say what I could or could not do until I had, by a careful and thorough examination, learned the actual status of his case. He requested that I proceed to *really* find out what was the matter. I herewith submit a brief anamnesis.

He was 48 years of age, a merchant, married—one child born to wife. He was born and lived in the country until he was about sixteen or seventeen years of age, then accepted a position in a store in a small rural town. He was active, efficient and a money-saver. At the end of four or five years he had bought the store, assuming a considerable debt. From time to time he went to the large cities "to buy goods," and there was frequently taken out by the drummers of the various business houses to "have a good time," during one of which he acquired a Neisser infection that lasted six months. There was an absolute and positive denial of any specific infection, nor did close question reveal any apparent symptoms of such disease save the one statement that he had had several attacks of herpes preputialis.

He married at the age of thirty, and later moved to a large city, where he entered actively into business life. He went out a good deal socially and indulged in considerable "high" living, to which he, as he believed, could reasonably attribute the troublesome condition of his stomach. For years he had a torpid (?) liver and suffered from constipation, which was controlled by the daily use of laxatives.

Severe Paroxysms of Gastric Pain

Several years before, he began to have attacks of excruciating pain in the stomach, lasting from one to two hours, which usually were relieved by emesis, hot applications, and a large drink of whisky. At times they would grow worse and require a "hypo," sometimes two, to control the pain. These attacks have increased in frequency and now occur with such severity as almost totally to disable him for three or four days. Nothing but morphine will allay the pain. His family physician diagnosed the case as one of gastralgia (?), in which diagnosis several consultants considered competent have agreed.

The man's family history is good, and he descends from long-lived, sturdy, robust stock.

A careful physical examination showed a well-nourished man, a little lop-sided when stripped, with normal heart and lungs; pulse, 80, full, strong; respiration, 22, normal; temperature, 98.0° F. Tongue large, flabby, moist, with white coating; breath a little foul. There was no tenderness over the epigastrium; moderate ptosis of abdominal contents; otherwise examination of the abdomen proved negative. There was complete loss both of the Achilles and knee-jerk reflexes; an Argyll-Robertson pupil and moderate static ataxia also were demonstrated. The right pupil was larger than the left. There was slight analgesia, more marked on the left side. Close questioning revealed a loss of libido as well as incapacity (which he attributed to his age and earlier excesses), as well as a weakening of the vesical sphincter at times.

His surprise and consternation were most marked when he was told that the disease was not gastralgia but *tabes dorsalis*. This occurred in the pre-Wasserman-Noguchi days, so no accurate serum test could be instituted, but the patient was told that in all probability he had had an infection that had remained untreated or had been treated without his knowledge. Later he found out that the physician who had treated his herpes had "suspected" that the trouble might have been specific and had given him "some treatment."

Here again I repeat what I have stated on several occasions, namely, that the greatest danger lies in what might be termed *mild* cases of syphilis. The open, frank and severe manifestations of this disease are often sufficiently impressive to compel the

patient to take, not only a lengthened course of treatment, but annual courses thereafter, to eliminate any possibilities. The point to be impressed upon us all is this:

Here was a patient whose full anamnesis (and I have given only the main points) revealed a suggestive state of affairs, to say the least, whose symptoms were *objectively* diagnostic, and for all that several excellent men failed so to examine him as to make a *real* diagnosis possible. My observation has been that the error lies largely in a failure to search rather than in a lack of the power to interpret the symptoms, physical and otherwise.

The Signs of *Tabes Tabulated*

I am confident that these good doctors would have made the same diagnosis had they tabulated the findings as follows:

1. Loss of reflexes (knee and Achilles).
2. Anesthesia (mild analgesia).
3. Argyll-Robertson pupils.
4. Loss of sexual power.
5. Gastric crises.
6. Specific infection.

The ultimate outcome of the case is interesting. Hypodermic mercurial medication relieved the gastric pain much better than morphine, while the institution of proper treatment, which I have described in detail in another place ("Rational Treatment of Locomotor Ataxia," *Alienist and Neurologist*, July, 1906), resulted in relief and prevented the further encroachment of disease. The man is living today and personally conducts his business. He lives a quiet, careful and hygienic life, content to be free from pain and disability.



Hand Injuries: Conditions Influencing Results

By RALPH ST. J. PERRY, M. D., Parkers Prairie, Minnesota

EDITORIAL NOTE.—This article is a continuation of the exceedingly interesting series on the common lesions of the hand which the author has been contributing to CLINICAL MEDICINE for several months. Last month it was interrupted, but we are glad to resume it with this issue. Every general practitioner should read these articles carefully.

THE result to be secured from the treatment of an injury is influenced by many conditions which are beyond the control either of patient or surgeon, also by conditions which are more or less subject to the will or dictum of one or the other.

The treatment of accidental injuries must be undertaken immediately upon demand and may not be postponed until conditions become favorable; thus we find surgeons often working under conditions which are disadvantageous both to themselves and to their patients.

Occupational and Individual Conditions Influencing Healing

A patient's occupation may influence his recovery; those engaged in country outdoor work—farmers, telephone and telegraph linemen, railroad section men, etc.—are usually in better physical condition than indoor or urban workers and their wounds heal more promptly. Men working in paint, lead, copper, and chemical works are subject to absorption of poisonous minerals, and their wounds are slow to heal. Butchers often suffer from infection, with delayed healing; this, too, is true of wool-sorters, rag-pickers, handlers of old iron, hair cleaners and packers, soap-fat boilers, and persons engaged in other occupations where they handle decaying or rusted materials. Persons who manufacture, sell or distribute alcoholic or malt liquors usually imbibe more or less of their goods, and their wounds are prone to develop inflammation and suppuration. Housewives, clerks, teachers, and others engaged in the more cleanly occupations rarely suffer inconvenience in injuries if they are healthy.

In persons suffering from obesity, there exists a tendency to suppuration and poor

healing; in the plethoric or fullblooded, the tendency is to inflammation; in the very lean and anemic, healing often is slow, so that frequently it becomes necessary to resort to feeding of the granulations. Both excessive alcoholic indulgence and gluttony are apt to cause inflammation and suppuration, with bad results. Age is not a detrimental factor, although it is generally considered that wounds in the young heal better, and in the aged not so well as in middle life. Neither does sex bear any special import except in some few instances where menstruation may excite slight congestion of the wound. In pregnancy and lactation, the danger lies chiefly in the general disorder which may follow a miscarriage or cessation of lactation due to shock. Menstruation, pregnancy, and lactation being physiologic processes should in themselves, if normal, have absolutely no effect upon a wound, though pregnancy has been known, in some cases, to interfere with union in fractures, the process abstracting the lime salts to such an extent as to prevent the formation of a satisfactory callus.

Case 1. Housewife, overly blessed with adipose tissue and afflicted with a large ganglion on the extensor tendon of the hand. To remove the ganglion, the parts were made aseptic and an aseptic operation was performed. On the second day, when the wound was dressed, it was noticed that the anticipated primary union was not taking place. The discharge was greasy-looking and unhealthy and it was manifest that suppuration was imminent. Aristol was applied locally and calcium sulphide given internally, together with a course of saline laxative and "antifat" remedies. This treatment was vigorously followed, and in ten days' time union by granulation was secured, with a minimum scar.

Case 2. Retired farmer. Having reached the age of 92 years, he presumed upon his privileges and undertook to do some repairs about the house, but his industry was terminated by a hatchet cut across the back of the hand. The wound was cleansed, sutured, and dressed with aristol, and good union, without inflammation or suppuration was secured in one week.

Case 3. School-girl, aged 18 years. Fell from a bicycle and abraded the back of the hand. Wound was cleansed and dressed with bismuth formic iodide. On the fourth day menstruation came on, when the wound showed signs of inflammation, but no suppuration developed. Four days later there was a synchronous subsidence of menstruation and inflammation and the wound progressed to an uneventful recovery.

For several years afterward it was noticed that at each menstrual period the site of this injury became erythematous and hyperesthetic. (This same phenomenon was observed in another young woman who had suffered a small abrasion wound of the knee.)

Case 4. Farmer's wife. Was thrown down and trampled by a bull, one hand being severely bruised and the ulna, radius and metacarpal bones broken, along with other injuries incurred. All wounds of the soft parts healed kindly, but the bones refused to knit.

Investigation into the cause revealed the fact that the woman was in the third month of pregnancy and was not getting half-decent food for one in her condition, and as a consequence the calcareous demands of the fetus were being supplied by drawing upon the maternal bones, thereby interfering with union of the fractured ends. These conditions were aggravated by ignorance and filthy surroundings such as are rarely seen. Eventually a halfway satisfactory union was secured, at which juncture a fortunate wilful disobedience of orders on her part offered an opportunity to get rid of the patient—which welcome opportunity was not neglected.

The woman passed to another surgeon, who rashly promised a rapid relief of the

false ankylosis and a healthy union of the bones. His attempted *brisement forcé* promptly broke up the union already existing between the fragments without loosening the tendon adhesions. After several weeks' treatment fibrous union of the bones was again secured, and again the patient was passed on because of her refusal to obey orders. The third physician in his turn left the hand and arm alone, attended the woman in confinement, then retired from further connection with the case, having learned the antecedant history.

Then came a sojourn in a hospital, where the attending surgeons, house surgeons, and nurses united in a compulsory course of the usual treatment for "stiffened cords," tendon agglutination and false ankylosis, which resulted in the woman being discharged, in four or five weeks, with fairly good motion in the fingers and wrist. Very promptly upon her return home all instructions were ignored, and when last heard of (two years after the injury) the woman's hand and wrist had returned to their condition of ankylosis.

Cachexia and Constitutional Diseases as Factors

Cachexia and constitutional diseases always influence healing. Tuberculous and scrofulous individuals display a marked slowness in healing; in those suffering from diabetes and Bright's disease, there is prolonged granulation, with a tendency to gangrene; rheumatism and gout always render a patient more subject to aches and pains, with inflammation of wounds; gouty patients may have a chalky wound secretion which delays healing; chronic cystitis, especially in the aged, depletes the recuperative powers of the sufferer; dysentery and chronic diarrhea exert a debilitating influence; constipation, with its concomitant autointoxication, promotes inflammation and suppuration; syphilis is notorious for its bad influence over wounds, causing much suppuration and delaying recovery. Concurrent and intercurrent acute diseases have more or less effect upon an injury in proportion as their effect upon the patient's general health and strength is great or small. Local skin diseases may complicate

a wound by inflammation, contamination from exudates or discharges, or by irritation, pruritus, etc., of the immediate peritrauma.

Case 5. Merchant. While enjoying an attack of gout, he attempted to help himself and accidentally cut himself with a pocket-knife across the index-knuckle. The wound was sucked by the patient and covered with court plaster, but after a few days it was noticed that healing was not taking place as it should and the attention of the attending physician was called to the matter. That gentleman found the wound exuding a whitish chalky discharge, and not understanding the nature of this condition, called a surgeon in consultation. From the history of the case and the nature of the discharge, a diagnosis of gouty maleficence was rendered and local antiseptic and vulnerary treatment substituted for the court plaster. The antigout treatment was pushed vigorously and in a few days everything was "O. K."

Case 6. Grocer. Had been, for several months, a victim of that form of eczema known as "grocer's itch." In opening a box, his hand was scratched by a clean nail, and while ordinarily this would have been an insignificant wound, it became inflamed and suppurated. An ointment of bismuth subnitrate and salicylic acid was applied to the eczema and iodoform to the scratch. The eczema disappeared in a few days, and the wound was healed over within a week.

Climate Influence

Climatic conditions have long been recognized as factors in the healing of wounds. Rain, cold, dampness, and chill militate against an uninterrupted recovery, are apt to excite inflammation and congestion, and, hence, their effects must be guarded against. The dry cold of the northern winters is not considered detrimental, as there is a lack of those sudden changes which make the winters of the thirtieth parallel noxious. Excessive heat, because of its prostrating effects and the overly abundant perspiration it induces, usually works against rapid healing. Nevertheless, some of the best and quickest results I have ever seen were in my tropical practice,

in Central Africa and the West Indies, where the people were acclimated and their clothing, food, and drink regulated to climatic conditions.

Location and residence of patients play an important part in the healing of wounds; those living in the country usually do better than city residents; the clear mountain air is more favorable to healing than that of valleys; a river bottom or a malarial site is notorious for its deleterious effects. A house that is dry, warm, clean, and well ventilated will prove a better surgical factor than a damp, cold, dirty, and poorly ventilated one.

Racial Characteristics Play a Part

Racial characteristics play a part in surgical convalescence. The nervous, restless American is apt to prolong healing by worrying over lost time and meddling with the treatment; the phlegmatic German takes his worries easier, but his beer and sausage (pork) are liable to make healing slow; the English, Scotch, and Irish are good subjects if properly nourished; the Chinese and Japanese, being largely vegetarians, are especially prompt in convalescing from wounds; the Italian, French, and Spanish are good subjects if they can be kept from meddling with the treatment; the negro, if well cared for, can recover from wounds as quickly as the Caucasian, but unfortunately most American negroes are dirty and poorly nourished.

The Patient's Mental Nervous State Has Its Effect

The mental condition of the patient often retards healing, especially where he worries over his accident, business affairs or family matters. Persons who have a cheerful temperament invariably get along nicely, while the morose and melancholy and the insane suffer prolonged convalescence.

I have found it best, where parts of the hand have been amputated, to abstain from any reference to the disposition of the amputated parts, as many people suffer a peculiar mental agony if they know or believe their fingers or hands have been burned, buried, thrown in a sewer or preserved in a museum jar. It is not a bad

policy to ask patients whether they have any preference regarding such disposition.

Case 7. Railroad brakeman. Because of a crush-injury, two fingers were amputated and subsequently burned in the furnace together with a lot of waste. A nurse told the man that she thought the fingers had been thrown into the sewer-pipe of the water-closet. That night there was no sleep for the poor fellow, because the smell of the filth upon the amputated fingers kept him awake. In talking the matter over with the surgeon the next day, it was explained to him that the fingers had been cremated and not turned into the sewer, and from that time on the patient complained of a burning sensation in those fingers.

The case evidently was one of those peculiar psychologic ones where there was need of bringing the subjective mind under control, and had we known enough at the time, the opportunity was a grand one for hypnotic experiment. The hallucination gradually disappeared as recovery progressed.

Insomnia, by its general effect upon the system, has a bad influence upon wounds. Excessive smoking is harmful in those not accustomed to it and finding time heavy on their hands during their enforced idleness smoke to "kill time," or whose friends give vent to their sympathy in gifts of cigars which the patients feel in duty bound to use up in an effort to show their appreciation. On the other hand, if an inveterate smoker be deprived of his tobacco, trouble is likely to ensue in the wound because of the nervousness arising from the loss of the accustomed soothing smoke.

Case 8. Night-watchman. In closing an iron door, his hand was caught and severely lacerated. About the third day matters seemed to go wrong; the patient was nervous and irritable and the wound had lost its peaceful appearance. A little questioning disclosed the fact that the patient, who was 60 years of age, and Irish, entertained, and freely expressed, forceful opinions of the nurses who would not let him smoke. His pipe and tobacco were restored, a few doses of aconite and gelsemium were given to chase away the

incipient fever, and no further trouble was had—everything was contentment and serenity.

Excessive venery causes slow healing because of its depleting effects, and patients should be cautioned to seek some other form of amusement during their convalescence. Even occasional overindulgence has been known to cause an inflammatory exacerbation with increased suppuration.

Case 9. Machinist. Hand was crushed in cogwheels and failed to heal with that celerity and steadiness which the treatment justified, there being flarings of inflammation which apparently were due to extra-traumatic causes. It was discovered that these frequently recurring aggravations of wound conditions were due to and immediately followed upon fornicatorial forays. An attempt to elucidate the matter met with resentment on the part of the patient as an abridgment of his personal rights and an assertion that he proposed to do just as he pleased, whether the doctor liked it or not, whereupon he was summarily dismissed and told to seek further treatment elsewhere.

Meddling Must Not Be Tolerated

Meddling by the patient, his relatives or friends is not to be tolerated at any time, and where such is persisted in, the proper thing for the surgeon to do is to withdraw from the case. Curiosity and the fact that thousands of the laity know more about wound treatment than educated surgeons (as they believe) are the chief factors in meddling. Friends want to see the injury, and some patients are proud of their hurts and delight in showing them; every friend has a remedy, a salve or a wash that is a "sure cure for cuts, wounds, and bruises"—and so the trouble comes. But when, as a consequence, inflammation, and suppuration develop, the surgeon alone is to blame. Unfortunately the pernicious meddling friend has been recognized by law as a surgical ignoramus, devoid of responsibility and liability, hence beyond the reach of legal recourse; but the surgeon, having been educated in the art of treating wounds, is required to exhibit the ordinary skill of his profession and is legally respons-

ible for any neglect or misapplication of this skill.

Case 10. Frizzing-machine operator. His hand slipped and came in contact with the knives of the machine, badly lacerating the hypothenar eminence. The torn parts were carefully replaced and adjusted, bound in place with a few strips of paraffin netting (see *ante*) and dressed with iodoform. The next day, when the victim appeared for dressing, it was noticed the original dressing had been tampered with. By way of explanation, the man stated that his mother did not approve of the surgeon's dressing, had removed it, washed the parts in rainwater which had been shed from the east side of a roof, and then applied a bread and milk poultice. The patient was eliminated immediately, with the admonition to let his mother assume full control and responsibility in the matter. I have no doubt but that he recovered eventually, for nature usually is very kind to those who "rush in where angels fear to tread."

Case 11. Farm-hand. To relieve a palmar abscess, the surgeon opened up the palm and evacuated the pus, applied a hot kaolin poultice and gave calcium sulphide internally to the malodorous limit. The abscess continued to evacuate copiously in spite of treatment calculated to check the supuration. The cavity was washed out as thoroughly as possible and a yeast poultice (see *ante*) applied, but to no avail. Then a dry earth dressing was applied and the patient told to return the next day, but failed to do so. A week later he was met on the country road.

"How's your hand, George?"

"Fine!"

"That's good; glad to hear it."

"Yep; but that stuff you put on didn't do no good."

"It didn't! What did then?"

"Dad took that dirt off and put on a poultice of fresh cow manure, an' it's doing fine ever since. Giddap, Bill!" and the surgeon considered himself discharged.

Case 12. Farmer. In working in the hayfield, he suffered a punctured wound of the palm, the tine of the hay-fork evidently injuring the periosteum of one of the metacarpal bones. Home treatment with various proprietary remedies was tried for several weeks, when someone suggested that possibly the wound would not heal because a cancer was developing in the hand and advised an immediate visit to a cancer specialist. This was done, and the cancer-man at once pronounced the case one of "malignant cancer" which was threatening the man's life and which should be burned out, by his special method, without loss of time. The patient consented, the burning began that same hour and was continued for two weeks, possibly three, when the hand presented a terrible appearance. A change of mind and loss of faith brought the hand to a legitimate physician who called a surgeon in consultation. As the only hope of saving the man's life, the hand finally had to be amputated, half of the forearm going with it.

Instructing the Patient

The patient, or those in charge, should be given explicit directions, in plain language, as to what may be done and what is not to be done; if necessary, reduce these directions to writing. If the patient be a foreigner and you are not thoroughly familiar with his language, write all directions in English, as that is the legal language of the United States of America and the burden of translation lies with the patient.



The Treatment of Infantile Convulsions

By E. P. S. MILLER, A. B., M. D., Chicago, Illinois

Assistant Professor of Medicine, Chicago College of Medicine and Surgery

THIS is not going to be a classically stereotyped article, fortified with laboratory experiments and concluding with a bibliography of inaccessible foreign authorities. My practice lies among the common people whom I have to teach in terms they understand in order that I may secure their intelligent cooperation. This makes me almost forget the medical "lingo" which we use at medical societies and will account for any occasional lapses into the vernacular of my patients which I may make.

Few sights are more terrifying to a mother or father than to see the first convulsion in one of their children. It is no pleasant thing for the doctor to handle, as the agony of the parents and the relatives is almost sure to get on his nerves, and his main resource is to keep cool and make the others get busy to help him.

It is an instinct of mothers to clasp a child to the breast and interfere with examination and treatment. Many students are graduated without any practical instruction on the treatment of infantile convulsions, and it is especially for them that these lines are written.

My "Baby Satchel"

I have a small obstetrical satchel, which I call my "baby satchel," and I keep it loaded with things especially needed for children's cases. Among them are a douche-bag with a large-sized male catheter attached for a rectal tube; a can of dry mustard; a bottle of powdered asafetida; a bottle of chloroform; and a solution of chloral, 1 in 60, or 1 grain to the dram. Of course, I have a small pocket-case with calomel, podophyllin, aconitine and other active agents. With this inexpensive outfit, I am ready to go to work as soon as I get my coat off and my sleeves rolled up above my elbows.

My first thoughts are to have the baby stripped, to put him into a mustard bath up to his neck, cold cloths to his head; and,

moreover, to unload the bowels of feces and, what is more important, to get rid of the gases. I find a washboiler is handiest, as one can get the required depth with the least amount of hot water. Did the reader ever observe how long it takes to get a quantity of hot water in the ordinary home?

An Enema of Asafetida Used

While the water is being heated or borrowed from the neighbors, I use the enema of asafetida. If I have time, I take one heaping teaspoonful of asafetida to a quart of water and boil it, stirring the mixture all the time, and then add enough cool water to secure the right temperature for an enema. Otherwise I stir the powder into warm water and break up all the lumps so that the douche tube will not get clogged. The bag should not be over three feet above the patient's body and the water should run in until some of it returns from the rectum outside of the tube. Withdraw the tube and let the feces pour out, as they generally do. Reinsert the tube and run in some more. Disconnect the rectal tube from the fitting and let the water run out through the tube. Massage the abdomen lightly, when often the gas will bubble out. The battle is half won then.

With the onset of the convulsion, whether before you can give the enema or after you have given it, take the baby on your left arm, test the mustard bath with your right elbow, then lower the baby into the bath up to its neck. The mother can put the cold cloths on its head and keep changing them. In a little while the child will cease its convulsive movements and relax, and then it should be put into a dry blanket and cold cloths kept to its head.

I have had to repeat the enemas and baths several times. I have long ceased to marvel at the quantity of undigested breakfast foods, sausage, and even chop suey that I have removed per enema from little children. If autointoxication doesn't

account for most of these infantile convulsions (aside from the onset of infectious diseases), then I lose my "one best bet."

In especially difficult cases I find chloral in 1-grain doses a great help, and sometimes I have to use chloroform by inhalation cautiously but enough to keep the patient relaxed.

I remember how, with the assistance of a nurse, we worked three hours with a pretty little ten-months old girl whose father had vanished and whose mother was compelled to work and board the baby with a good-hearted but ignorant old lady. Before I left, the little one was playing with its big toe; and this case afforded me a feeling of victory and happiness such as made me realize that it was certainly worth while to be an everyday family doctor.

As to after-treatment, calomel and saline laxative are required, and other remedies as the condition demands.

[Prof. Miller has given us an extremely practical paper, one that is sure to be

appreciated by readers of CLINICAL MEDICINE. In this connection I am led to quote from Dr. Raduc's fine book, "Diseases of Children." He says:

"First of all give the child a full hot mustard bath, then wrap in blankets. For fever give aconitine every half hour, as the case requires. Be sure to give dose enough; and count out six or eight granules of calomel (1-6 grain each) and give one every half hour until all are taken, followed with a dose of saline laxative [sweetened and flavored, it makes a nice lemonade, and in young children may be given from the nursing bottle.—Ed.] Give enough of hyoscyamine to control the convulsions. You may add gelseminine with benefit. If the case is severe push the aconitine and hyoscyamine to full toleration, and give an enema of glycerin, to unload the bowels. If the fever is high apply clothes wrung out of cold water to the head."

Perhaps some of the readers of CLINICAL MEDICINE will have other suggestions to offer.—Ed.]

Medical Practice in Nevada

The Advantages and Disadvantages of the State, as Seen by a Doctor Who Lives in It

By **GEORGE L. SERVOSS, M. D., Fallon, Nevada**

THE State of Nevada ranks lowest, as regards population, of all of the states of the Union; not so, however, in wealth. One reason for the lack of population has been the fact that it has been a difficult and expensive matter to bring water to the possible productive ranch lands. Another reason has been the fact that, with the exception of the one railroad in the north and one in the south, there have been no means of getting readily over the country. But both of these difficulties are being rapidly overcome.

The national Government has, within the past decade, done much to reclaim the land. Millions of dollars have been appropriated and spent in reclaiming the land known as Carson Sink, in Churchill County, and from a desert, dotted here and there by producing ranches, this plot of ground,

comprising some 300,000 acres, is rapidly becoming a garden-spot.

Rejuvenation of the Mining Industry

A revival of the mining interests has likewise done much to bring the state into the limelight. Ten years ago the country now covered by Goldfield and Tonopah was a desert waste, and no one had an idea that vast wealth would ever be uncovered at either spot. Round Mountain was, unknown, and would never, probably, have been discovered had not a badger, in burrowing out his winter quarters, dug out a slab of almost pure gold. Ely, until within a very few years ago, was considered a mediocre gold camp, with but little in the way of a great future, but the discovery of copper made it one of the great producers of the red metal. Pioche has been a

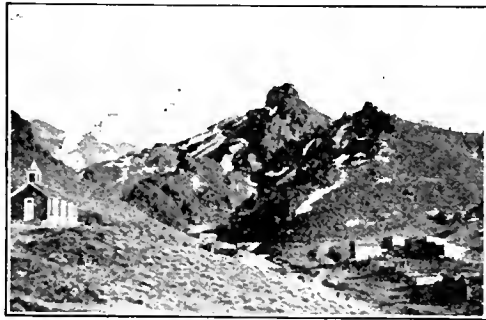
mining camp for a generation and has produced millions, and it was thought that everything worth while had been mined out, but it remained for the advanced prospector to discover great deposits of lead and silver in what was thought to be barren territory; and this camp promises a greater production of mineral than ever before. Fairview, while as yet in its infancy, has produced millions from a very small scope of territory, within less than a decade, and promises still more for the future.

This camp of Fairview had been the scene of locations for years, but although locators' monuments had been built on what is now a bonanza mine, nothing had been discovered which was thought worth while. The camp is located within three miles of the noted Overland trail, over which passed the stampeder of '49 during the period of the gold excitement in California, and later to Virginia City, during the days when the famous Comstock Lode was making millions for all comers. The trail was literally strewn for miles, both east and west, with rich float from the Fairview Hills, but as this float did not carry free gold that could be seen, little attention was given it, and the travelers ignorantly passed by what now promises to be one of the big things of the mining world.

Sheep herders who ran their bands over the winter range afforded by the foot hills and slopes of Fairview Peak were prone to build claim monuments at various points, but as they did not know the particular ore carrying the values, they were unable to prospect the ground intelligently and the locations were allowed to go by default. Just two years prior to the discovery of the Nevada Hills, the bonanza of the Fairview district, a sheep herder had built a monument within ten feet of the point where the discovery of the famous gold ledge was made, and he built his monument with rocks assaying more than \$250 per ton. As a sample, he picked up a piece of float, which, on being assayed, showed less than \$10 per ton in value, and so he never returned to the spot to do the necessary location work. At the point of the dis-

covery, rock in place was later found to assay from \$200 to upward of \$1000 per ton, and within two hundred feet of this spot a "glory hole" was subsequently opened up which produced more than \$300,000 in less than six months. The old-time prospector looked for free gold, and he would give but little consideration to any rock which did not carry the yellow metal in a way to be visible; and because of this, much of the richer portion of Nevada was passed by in the rush to California.

With the mining excitement of the past ten years, many camps have been opened up that have failed to make good, although practically every one of them gave surface promises, and many of them would have made good had there been better trans-



A Nevada mining "town"

portation facilities. These latter camps will eventually come into their own through the erection of mills, by means of which the ore will be reduced to bullion, and the shipment of pounds instead of tons will obviate the necessity of rich ores to make such mines profitable.

The 1907 Boom

The excitement incident to the discovery of the newer mineral-producing areas, and the knowledge that vast areas of ground are being reclaimed for agricultural purposes, have both served as an impetus for a stampede to Nevada. As in all such booms, the bounds of conservatism have been utterly overstepped, and too many people of all walks of life have rushed into the state with the idea that it was the home of "easy money," and that all could come

in and, within a comparatively short time, leave with a big fortune. During the boom days, prior to the panic of '07, this was in a measure true, and no one wanted for money. It was an easy matter to dispose of any sort of a mining claim, no matter how much of a "wild cat" and ranch land was held at a premium.

And Then the Doctors Rushed In

Merchants of the East sold out and moved to Nevada, where they reentered business and in many instances prospered. The towns of the state were all well supplied with professional men of all sorts, and, based upon the census of 1900, there were less than 300 persons for each doctor in the state. Based upon the census of 1910 the ratio is one doctor to about 600 population. But even at that rate, and more especially in the larger centers like Reno, Goldfield and Tonopah, where the ratio is considerably less, there are far too many doctors for the existing population, and it will probably be some time before the ratio is properly adjusted.

Those who are in practice in Nevada are, for the greater part, making a good living, but little else, unless they happen to have other interests than their practices.

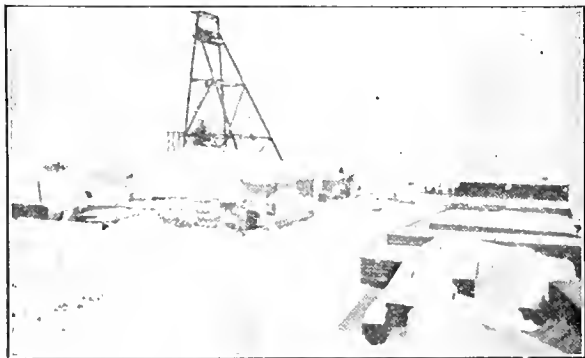
During the past five years many of the practitioners located in the larger centers have left the state for other points where the competition was less marked. The fees, which in the majority of instances are much better than those to be obtained elsewhere, have attracted many doctors to Nevada, but as a rule this difference has not been sufficient to overcome the lack of practice.

Nevertheless, as time goes on and more of the agricultural lands of the state are reclaimed and put under cultivation, it will become a better field for the physician. It is very probable that many more rich mineral deposits will be discovered and developed, and each new mining camp will demand the services of at least one doctor. Still, those who would adopt mining-camp practice should make thorough investiga-

tions before locating permanently in such places, as far too many camps are but "flashes in the pan" of the "here today and gone tomorrow" type of towns, and those who locate permanently, without first investigating, are frequently left stranded, if not worse, and scarcely able to get away without serious losses.

The Doctors Are Above the Average

Although, until very recently, the medical laws of Nevada have been rather lax, her professional representation has been above rather than below the ordinary, and we find our country doctors doing much work which usually is turned over to the metropolitan specialist in the more densely populated eastern centers. Here the doctor



A mining plant after a heavy snow storm

is many miles and many days away from the specialists and, in consequence, is forced, in many instances, to do work ordinarily which is considered as being outside of the realms of general practice. In one small agricultural town one man has done upward of twenty-five appendectomies within the past five or six years, as well as other capital operative work, and he and his local associates never allow a case to get away from the town.

In Reno we find all of the special lines well represented, while her hospitals are as down-to-date as are those of the larger cities, and very little, if any, work is allowed to escape to the larger California cities. Thus, taken as a class, the doctors, through being thrown on their own resources, even in the smaller mining

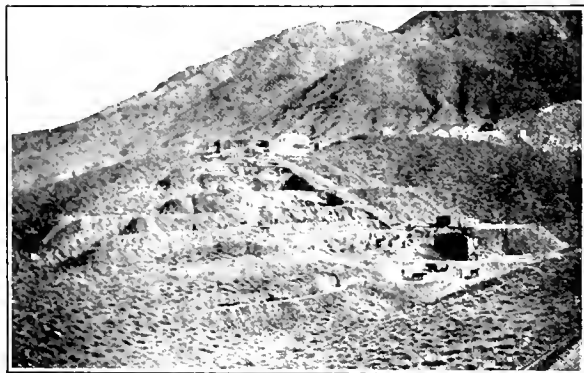
camps of Nevada, are superior in many ways to their brethren of the more densely populated states of the East.

Self-Dispensing of the Active Principles Largely Practised

With the exception of a few of the larger towns, but very few of the communities of Nevada are sufficiently well populated to warrant prescription drugstores, in consequence of which the doctor is obliged to dispense the greater proportion of his remedies. But very few in Nevada find their practice confined to a small area, the doctor, in many instances, being obliged to drive hundreds of miles in caring for his patrons. This is a further reason why he must not only dispense, but must be ob-

luded to cope with any condition which may present itself.

Let me explain this last point. When called to a very considerable distance from his base of supplies, the doctor frequently is obliged to remain days or, in some instances even weeks, with his patient, and here he must, necessarily, be in a position, not only to afford immediate relief, but to carry the case through to termination. In order to do this, it is necessary that he be well equipped with therapeutic agents, and the Nevada doctor has found that the active principles, owing to their small dosage and the compact manner in which they are offered, allow an extensive equipment in a comparatively small space.



A view of the Nevada foot-hills, with a mine in the foreground

liged to cope with any condition which may present itself.

Not only, however, is the Nevada doctor progressive in a surgical way, but in a medical as well. I have canvassed the state pretty thoroughly, through correspondence, and I find that many of the profession are giving up the old and unsatisfactory galenics and employing the active principles of the plant drugs. This is done for two reasons. In the first place, I am informed that better results are being obtained through the application of the latter agents. Secondly, owing to the immense territory covered and the fact that drugstores are not easily reached, the doctor has found it necessary that he be well equipped with therapeutic agents, while the small space required to carry a

Agricultural and Industrial Development of the State

While Nevada is at present overdone, and will probably remain in such a condition for some time yet, the day is coming when she will become a state, not only rich in mineral products, but in ranch produce as well. It has been found that the reclaimed desert land is extremely rich and that agricultural products of all sorts grow with much more rapidity

and richness than in the older sections.

With the reclamation of the desert, other industries will be encouraged. Today we see a million-dollar beet-sugar factory in course of erection in the center of the Truckee-Carson irrigation project, and this industry alone will bring not less than half a million dollars annually to the ranchers of the Carson Sink. Dairy farming is becoming an important industry in the valleys of Nevada, and her butter is commanding a premium in the Coast cities. Nevada has long been recognized as the producer of the finest honey marketed, and we find the hives out in the desert, frequently far from any productive area, as the bees gather their sweetness, not from the cultivated clover and buckwheat, as in the East, but from the blooms of the sage-

brush and grease-wood. Not only has it been found that the various brushes of Nevada will produce excellent honey, but the rabbit-brush promises to supplant the rubber-tree of the South to a very considerable extent, in that it furnishes a product very similar to, if not actually true, rubber.

About the Climate

Nevada furnishes one with any sort of climate he may desire. Las Vegas, in the extreme south, located in one of the fertile valleys, gives one an admirable winter retreat, while Lake Tahoe, in the north, is incomparable as a summer resort. With the exception of the country in the extreme north, the climate of Nevada is not extremely variable, and this commends this country to the invalid who would live close to nature. The heat of summer, owing to the dryness of the air, is not depressing, and one does not feel the chill of winter, for like reason. Tuberculous patients who come to Nevada and follow an out-of-door life, unless beyond relief, invariably show improvement, if not entire recovery; and that with but little medical interference, as Nevada doctors know.

While Nevada is far removed from the frontier, one must anticipate leaving behind many of the niceties to which he may have been accustomed in the older and long-established communities, should he migrate to the "Battle-born State," for here we all rough it to a greater or less extent.

He who comes to Nevada will find a comparatively free and easy democracy, in that everyone does as he pleases, so long as

he does not infringe upon the laws. The gambler associates with the preacher, and the inhabitants of the "red light" are not looked upon with the scorn of the East. The saloons, which are invariably in evidence, are not, as a rule, hell-holes, but rather the club of the laborer and of the rich as well. With hardly an exception, everyone in Nevada is given to the use of alcoholics to a greater or less extent, and drinking is not considered an unpardonable sin and is never carried on behind closed doors—the bars are all open to the sunlight of the outer world.

We have very few, if any, hypocrites in Nevada, and no one makes pretensions of being more than he really is. The "bad man" has been eliminated, and the packing of a gun is no more a necessity in the Nevada desert than in Canal Street in Chicago, in fact not as much so. We sleep with our doors unlocked and without fear of thieves, as there are but few of that class among us. Our women go about day or night without fear of molestation, as there is not a man in the state, no matter what his walk in life may be, who does not respect the feminine, whether rich or poor.

It has been said in the past that all that Nevada required in order to make it one of the finest places in which to live was "more water and good society." The latter we have achieved. The former is being brought to us as rapidly as time and money will permit, and with the coming of water, the desert will bloom and furnish a haven for the one of the East who would live in a land of perpetual sunshine and plenty.

TEACHING in medicine, which has for its chief and final aim the diagnosis of the disease, is pernicious, because it tends to generate a sense of contentment and triumph over the arrival at a diagnosis, because it appoints as the journey's end what should be but a breathing place, because there goes with this emphasis of investigation to predicate a diagnosis the implication, at least, that with the diagnosis made, investigation can cease and treatment begin.

—E. R. Le Count, in *Science*.

The Application of Superheated Air*

A Therapeutic Measure of Value in the Practice of Gynecology

By EDWARD H. EGBERT, M. D., Washington, D. C.

MUCH of the discussion, in the meetings of the various gynecological societies has been, more especially during the past few years, on the subject of conservation of the genital structures, in the surgical treatment of young women. It is extremely difficult and sometimes impossible to decide, from macroscopic inspection and tactile sense, whether real conservatism lies in so-called conservative or in radical treatment, but the indications are being more and more definitely outlined, and a very fair balance is being struck. Subsequent operation, following conservative measures, is less and less frequently necessary; not because more radical operations are being performed, but because of constant improvement in methods of surgical treatment, from the standpoint of conservation of physiologically active structures.

In contrast to these brilliant achievements in the field of operative surgery, a very slight advance has been made by American gynecologists in nonsurgical procedures of real therapeutic merit. Mention has been made of some of the means advocated, only to condemn them, and justly so, for much of the so-called "local treatment" is in reality meddlesome tinkering, affording no objective relief, but increasing subjective symptoms in intensity by attracting the patient's attention to the site of her disease.

Yet no one will contradict the statement that there are many conditions frequently met in the practice of gynecology which are not amenable to surgical treatment at all, or if operation is advised, it is with the understanding that the symptoms may be either somewhat relieved, unaffected, or even increased in severity. There are other instances where operative interference is unquestionably demanded, but can only be accomplished at the expense of removal

of secondarily involved tissue, and at the not inconsiderable risk of serious injury to bowel, bladder or ureter, in addition to the peril of arousing renewed inflammatory activity. I have reference more particularly to the frequently seen cases of menstrual disorders, and to subacute and chronic inflammatory conditions within the pelvis.

While we may, as American physicians, point with pardonable pride to the gigantic accomplishments of our fellow countrymen in the development of gynecological surgery, we must acknowledge that Teutonic surgeons have met the therapeutic needs of the above-mentioned general class of conditions with almost equal zeal. English literature, with the exception of one or two very recent papers, sheds practically no light on this most important subject, while the results of much highly scientific investigation, covering the past decade, can be found in the German medical periodicals.

Intense Dry Heat and Other Physiologic Measures in Pelvic Lesions

As a method of treating patients falling in the above somewhat indefinite gynecological classification, I believe that in thermotherapy, in the form of applications of superheated air, combined, in indicated cases, with such adjuvant measures as will hasten recovery, we have a means worthy of consideration. We must not lose sight, however, of the patient herself in our attack upon the pelvic lesions; digestive, excretory, and circulatory derangements usually coexist, while in almost all cases the nervous system and the mental attitude require appropriate treatment. Hydrotherapy, psychotherapy, massage, hygienic measures, gymnastics, correction of posture, and tonic medical treatment serve as valuable adjuvants in the vast majority of cases requiring the use of superheated air.

The beneficial results obtained by the use of intense dry heat are due to the arterial hyperemia produced. Heat in the

*Read before the Therapeutic Society of the District of Columbia, January 14, 1911.

form of poultices, fomentations, hot-water-bags, hot salt-bags, douches, and the like, are familiar means of treating painful conditions, but heat above a temperature of 120° F., when so applied, is exceedingly painful, and at slightly higher temperatures destruction of the epidermis will result, while dry air may be tolerated at a temperature of 400° F., and even higher.

Superheated air came into medical use in the early nineties of the past century, and became popular through the publicity given to what is known as the Tallerman treatment. The early experiments were carried on by Shadwell, Sibley, and other surgeons at the Northwest Hospital, and also at St. Bartholomew's Hospital in London.

This form of treatment was shortly after put to extensive tests in some of the great clinics of continental Europe, Australia, and America, but it was almost exclusively employed in orthopedic practice until 1901, when Polano reported his results in using superheated air in the practice of gynecology. A few years later Bier announced his deductions concerning the curative power of induced hyperemia, so a more scientific aspect was given to the employment of intense heat, and the early results obtained empirically are now of easy explanation.

Physiologic Effects of Superheated Dry Air

Briefly, the physiologic effects of superheated dry air are:

Locally:

First: An intense hyperemia of the structures directly exposed to the heat. (This is evident by the flushing and mottling of the skin, a condition which remains for several hours after exposure, due to the temporary local vasomotor paralysis. That this hyperemia is also the condition of the deeper structures underlying the exposed area, is evident by the fact that pain is entirely relieved, adhesions are softened and deep-seated exudates are absorbed.)

Second: Lymphatic circulation is quickened, a most important phase of the reaction.

Third: A marked diaphoresis, of an acid reaction.

Fourth: Pain from whatever cause is entirely relieved.

Fifth: Stimulation of normal cell growth, as seen in the treatment of ulcers and fistulous tracts.

Constitutionally:

First: Profuse diaphoresis, due to a general dilation of the cutaneous blood-vessels.

Second: Increased pulse-rate, with first a rise and then a fall of blood pressure.

Third: A rise in body-temperature, of from one to 4 or even 5 degrees, in direct proportion to the degree of heat employed, and to the area of body exposed to the heat.

Fourth: A corresponding increase in respiratory rate.

Fifth: A sedative effect upon the nervous system. (A general relaxation and sense of well-being is the usual effect of a treatment. Frequently the patient will sleep for a time.) The rise in body-temperature is due largely to a marked increase in katabolic activity; so, incidentally, much is gained in those cases complicated by malnutrition and malediminution.

Contraindications to Superheated Air

Blesh gives arteriosclerosis as a contraindication for such treatment. Schell warns against its use, believing it to have caused acute nephritis in one of his patients whom he treated by this method for subacute articular rheumatism.

On the other hand, the personal experience of the writer would disclaim such untoward results, he having used, with most happy results, hot-air applications in the treatment of acute diffuse, and chronic parenchymatous nephritis, and also in the uremic intoxication consequent upon chronic interstitial nephritis. Irish reports favorably upon the use of like means in the same class of conditions, while Wightman states that the kidneys are relieved of congestion when heat is applied to the body.

In gynecological practice, the contraindications are easily foreseen, when we have in mind the physiological action of the heat and the pathology of the condition to be treated. Hemorrhagic conditions and neoplasms dependent upon the hypernutrition for their development would

naturally contraindicate any treatment that would produce an arterial hyperemia. Malignant tumors might increase in virulence under such treatment, and metastasis through the lymphatic or blood circulation might easily be encouraged. Inflammatory states, during the febrile stage, would be quickly provoked to suppuration, with abscess formation, and possibly evacuation of the pus into the bowel, bladder or through the prophylactic membrane into the general abdominal cavity. If, in the treatment of exudative lesions, the temperature should rise after a few applications, this method should be abandoned for the time.

The Hot-Air Apparatus as Employed by the Author

The apparatus used by the writer is one devised by Gellhorn, a modification of Keher's model. It consists of two semi-circular cradles of asbestos-lined sheet-iron, made so as to telescope one over the other. By pulling out the cradles, a larger area of the body may be exposed to the heat, in case more marked constitutional effects are desired. Eight 16-candle-power incandescent lights furnish the heat. These are attached along the inner sides of the arcs, and an insulated feed-wire furnishes connection to an electric switch. An aperture in the top of the cabinet is made for the insertion of a chemical thermometer. The ends are closed in by heavy blankets, to retain the heat when giving treatment.

This form of appliance has many advantages over the old style of wooden-box or metal-oven apparatus, heated by the actual flame. It is more convenient, not dangerous, and embodies the additional valuable feature of light. While the low-power lamp of small amperage is poor in chemical rays, and can therefore exert but feeble bactericidal powers, there can be no doubt that the luminous rays stimulate metabolism and increase leukocytosis and phagocytosis. Winternitz says: "There can be no doubt, however, that the light itself adds an element of importance to the procedure. In the incandescent bath a temperature of 115° F. is therapeutically equal to 350 degrees in the hot-air chamber heated by gas." The thermic rays, how-

ever, are the chief factor in producing the results.

Mode of Administering Hot-Air Treatment

During the bath a cool wet cloth or an ice-cap should be kept to the head. The first bath should be of short duration, and the temperature should not be allowed to run above 200 degrees. The duration of the treatment should be increased with each treatment up to sixty minutes, and the degree of heat to 220 and up to 280 degrees, according to the tolerance of the individual. Some of the German operators use much higher temperatures, even up to 400 degrees; but this procedure is attended with an element of risk, and the writer believes that the lower degrees are productive of just as much good. The heat should never be raised if the patient complains of a burning sensation, fulness in the head, dizziness or faintness.

Cooling off should be gradual, followed by a dilute alcohol or magnesium-sulphate solution sponge-bath, and after this a brisk coarse-towel rub-down.

The pulse, temperature and subjective symptoms, rather than the degree of heat expressed by the thermometer, should be the guide in giving treatments.

As to the intervals between administrations, one must take into consideration the condition we desire to influence, and the reaction of the patient to the heat. A fecal fistula may require two exposures a day, while one treatment every third day may prove sufficient for a case of pelvic adhesions.

In thin subjects, the iliac spines should be covered with fluffed gauze. Perspiration may be wiped off by the patient, or gauze bags containing calcium chloride may be hung inside the cabinet to absorb the moisture. Unless care is taken, burns will occur from moist air.

Adjuvant Mechanical Measures

In the treatment of uterine displacements, with adhesions, various mechanical methods, such as tamponade or pelvic massage, may be employed as adjuvant measures while the hyperemia is still present. It is remarkable how much stretching of ad-

hesions can be done immediately after exposure to the heat without causing pain. Where there are extensive adhesions to combat, more especially in postoperative cases, the various exercises under the head of kinesitherapy may be performed shortly after treatments, with excellent results. Adhesions between the viscera and the abdominal walls are by these means stretched and thinned, so hastening resorption. In exudative parametritis, Nauheim baths, during the interval days, especially where neurasthenia is a condition to be met, also hasten recovery. Bandler meets with success with this method alone.

Indications for the Employment of Superheated Air

The various conditions in which superheated air is indicated as a therapeutic agent may be considered as follows:

First.—Conditions not amenable to surgical treatment, and awarding us with but indifferent results from medicinal and other forms of therapy, namely:

a. Menstrual disorders dependent upon faulty circulatory equilibrium rather than upon any demonstrable pathological change, as for instance, the amenorrhea or dysmenorrhea resulting from a sudden chilling of the body during the menstrual epoch.

b. Disorders dependent upon insufficient development or upon superinvolution or lactation atrophy.

c. In amenorrhea, relative or complete, due to inactivity of the ovaries. (The increase in arterial blood supply resulting from the active hyperemia induced stimulates them to perform their physiologic function. Heinsius believes, as a result of his investigations, that the return of the regular menstrual flow in cases of this type is due to an increase in the internal secretion of the ovary, with consequent hypertrophy of the endometrium.

d. In certain conditions, such as a low grade endometritis dependent upon chronic passive congestion of the pelvic veins, with sluggish lymphatic circulation, thus giving rise to chronic uterine and cervical catarrh, enlarged and boggy uterus, with sensation of pelvic distress.

Second.—Conditions heretofore considered surgical diseases, but rendering far from ideal results from surgical treatment. Such as:

a. Unabsorbed exudative masses.

The lesions in such cases, that is, the inflammatory foci, are imbedded in hard exudative masses and can be reached only at the expense of removal of considerable tissue, and at risk of injury to bowel, bladder and ureter. The active hyperemia relieves the pain and tenderness, softens the mass, stimulates lymphatic absorption, and promotes normal cell growth.

The rapidity with which some plastic exudates, even of stone-like consistency, melt away is astounding. Keilman reports the cure of more than fifty such cases in from two to three weeks' treatment. Fett, Wagner, Eltze, Hasenfeld, and others testify to similar experiences. Many of these patients afterwards became pregnant and went to term. Fett used induced active hyperemia, with curative results, in the treatment of pus-tubes. Three of his cases he found with perfectly normal tubes at subsequent abdominal section for other indications.

b. In pelvoperitonitis, in the inactive stage, or in the chronic stage with its dense adhesions, resulting in dislocation and fixation of the internal genitalia, intense dry heat will give as favorable if not much better results than will operative procedure. Symptomatic cures may be confidently expected, and if simultaneously adhesion-stretching manipulations are performed, together with pelvic massage followed by careful tamponade, to exert prolonged pressure, an objective cure will also reward our efforts in some cases.

Third.—Conditions requiring surgical interference, but which, from the very nature of matters, are not good subjects for operation. Frequently the pelvic structures are so cemented together that it is impossible to make an accurate diagnosis.

a. Cases of old pus-tubes imbedded in a plastic exudate which has glued together intestine, tubes, ovaries, uterus, and perhaps other structures, cannot be surgically removed, under the circumstances, without sacrifice of ovaries, and some-

times of the uterus itself. Applications of superheated air will remove this exudate and leave the field easy of access for operation.

b. Where there is a large mass forbidding accurate diagnosis, this form of therapy, by doing away with the mass, will not only clear up the diagnosis, but render favorable conditions for operative treatment. Gellhorn cites a personal experience with such a case:

The woman, who had suffered a puerperal infection twelve years before and had been subjected to much ineffectual treatment, presented herself with a solid mass, filling the pelvis, rendering an accurate diagnosis out of question. Eighteen treatments caused dissolution of the exudate, permitting the uterus and two large pus-tubes to be easily mapped out. However, pressure symptoms and tenderness were now relieved, and though operation had been so rendered a simple and safe procedure, the indications for its performance had disappeared, leaving the former semi-invalid a subjectively well woman.

Fourth.—Postoperative conditions indicating the use of this form of thermotherapy are numerous and exceedingly important. An apparatus for administering such treatment should be a part of the equipment of every hospital. Some of the most dreaded of the operative complications and sequelæ react more favorably to this treatment than to any of the older methods.

a. Postoperative shock. Heat has long been considered one of the sheet-anchors in the battle against this alarming sequel. The collapse, and dangerously subnormal temperature, especially of the skin and extremities, the pallor and lowered blood pressure, all demand prompt and decided measures to combat the vasomotor disturbance responsible for this condition. Some will wisely argue that in shock we have an engorgement of the splanchnic veins, with lowered blood pressure, and that the superheated air will tend to increase the congestion and thus still further lower blood pressure. On consideration, though, we shall see that heat produces active, i. e., arterial hyperemia, increases body-heat, primarily raises blood pressure, and causes hyperemia of the cutaneous vessels.

The cradles of the apparatus should be pulled out full length, so that the thighs and thorax are also exposed, especial precautions being taken not to burn the unconscious or semiconscious patient and the heat should be removed as soon as reaction is established.

The writer believes that the heat, assisted by a rather full dose of atropine hypodermatically, and from 1-2 to 1 fluid ounce of infusion of digitalis in from 12 to 16 fluid ounces of strong hot coffee, per rectum, will save many cases of severe surgical shock.

b. Intestinal paresis. The intense heat quickly stimulates peristalsis, flatus is expelled, colic and the distress and danger of distension are relieved. Gelinsky recommends such a procedure most highly, using it as soon after the operation as the indication arises.

One need not hesitate in using this means in cases of infection of the abdominal cavity, provided the infection is mild, or if severe, that drainage is established, for the peritoneum, rendered actively hyperemic, will all the more successfully combat the assaults of the invading host.

In a personal case, one being treated for old postoperative adhesions, the most obstinate case of constipation ever witnessed was incidentally cured, although the patient had suffered from severe constipation since childhood.

c. It affords a simple means of provoking free diaphoresis in postoperative suppression of the urine.

d. Postoperative adhesions can easily be "nipped in the bud" by applying the heat while they are in the process of formation. This should be a routine measure, when operation has been performed, to break up adhesions, or when adhesions have been incidentally encountered, or where formation of adhesions might be expected because the viscera have been subjected to trauma, by the use of packing gauze, or in other ways.

e. In nonclosure of wounds, infiltration of wounds, and in the occurrence of fistulæ, intense heat may be depended upon to give positive results. Two cases of infiltration of the wound, following perineorrhaphy and

complicated by rectal fistulæ, were cured by Gellhorn in less than two weeks' time.

f. In fecal fistulæ early closure is produced, the hyperemia stimulating granulation. Gellhorn cites a case of a large fecal fistula, in which the results were remarkable, after failure of the permanent water-bath method.

In closing, I wish to state that, after a somewhat limited experience in the use of superheated air in gynecological practice during the past year, and a rather more extensive experience in general medical and orthopedic cases, I am lead to the conclusion that we regular physicians of

America will do well to devote more of our time to its application. We cannot afford to ignore so valuable an addition to our therapeutic endeavors. In Germany, more especially, it is a well-established method of treatment, and with more extensive employment, and the attention which it richly deserves in the literary phase of medical activity, its indications and limitations will become more generally understood.

This is the epoch of therapeutic development from physiological concepts in the field of medical practice in all of the various specialties. Let us do our share.

The Most Unfashionable Disease

*How the Sins of the Fathers Are Visited Upon the Children,
Through Insanity—Decadency*

By EDWARD G. SUGG, M. D., Chicago, Illinois

Professor of Psychiatry, Chicago College of Medicine and Surgery; Formerly Physician on the Staff of the Connecticut State Hospital, Iowa State Hospital, and the North Shore Health Resort

"GIVE me another doll," repeatedly demanded the 26-year-old scion of one of our city's most respected aristocratic families, as he cavorted and gayly disported himself around a stolid Teddy bear, to whose imagined ferocity he was offering shrinking victims in the form of doll babies, beneath the watchful scrutiny of a stalwart Irish attendant, whose sole duties consisted in supervising the animal requirements of his charge. Tiring of this particular form of festive indulgence, his next mental exercise is an inadequate performance upon a silver mouth-organ to the distraction of his immediate neighbors. So the program of his limited existence reverted from one form of childish and infantile diversion to another, despite the fact that he had reached mature age, with full physical development, and was the owner of a brown-stone-front mansion on the most exclusive street of our largest city.

The very unfashionable disease of which he was a victim had, in process of time, rendered him such an ultra antisocial unit, that his retirement to a quiet place in the

country had been thought desirable by his immediate friends and relatives. All reference to him was made in hushed whispers, or, as was more frequently the case, diplomatically avoided. Visits to his enforced place of retirement were conducted in a surreptitious manner indicative of no particular personal pride in the relational conditions, nor were the visits of a protracted nature. So would he continue a blot upon the family escutcheon until death mercifully removed him, but with the never dying fear haunting its members of a possible victim in the same family, at some future time.

The Sins of the Fathers

The lamentable feature of this, as of thousands of similar cases, is the recognized fact that the unfortunate individual was not in the remotest degree to blame for his limited mentality. Instead of casting disgrace upon his family, his family had bred in him germs of a mental disease of which he was then exhibiting the symptoms. An outcast from society, he was ostracized as completely as were lepers of old. The

verdict of insanity rested upon him, and never again could he take his place in the world of men. Those upon whom rested the immediate responsible causes would never experience any remorse, for either they were dead, or, if living, it would be difficult to find a diagnostician sufficiently skilful or courageous to point out the original lesion.

The sins of his forefathers had been visited upon this mentally aberrated individual, even as this universal law finds its exponent in all members of the human race. Every unit of the human family is subjected to the tyranny of mental and physical conformations to ancestry. In many instances traditional earmarks will persist through many generations in such manner as to constitute what are popularly designated family traits. To the casual observer these are more apparent in peculiarities of features, gait and mannerisms.

In the mental life samenesses exist, though less apparent and subjected to greater modifications. Unhealthy thoughts, tone-feelings, and actions leave a mental residuum which is vitiated, passing on a morbid strain to the next generation which, although not a condition of actual insanity, produces an insane temperament.

So true and well established is this fact that it might be correctly stated that man is at any period of his life what he has inherited, plus the modifications. Personal experience teaches us how difficult it is to change materially the essential fundamentals of inherited mental proclivities. They may be modified or subdued, but not extinguished. Latency may make us for a time overlook them, but the proper combination of circumstances will again bring them to the front.

A Family History as An Example

An examination of the family history of the unfortunate young man mentioned above will amply illustrate this fact.

The great-grandfather was addicted to the intemperate use of alcoholic beverages, becoming frequently utterly intoxicated. In addition to this, he manifested immoral tendencies, and contracted bad habits which he made no endeavor to correct.

All sense of altruism was subjected to selfish ambitions and narrow egotism.

The son of this man, who became the grandfather of the patient in question, was a drunkard, with frequent maniacal out-breaks of temper, which were uncontrollable and during which he would commit personal injuries on others. Moreover, he was unscrupulous in his dealings with fellow men, being known as a liar and a cheat. Socially he was ostracized. Late in life he became a victim of paresis, from which he eventually died.

Warned by the experience of his father, the son of this man abstained from intoxicating liquors, but the result of faulty heredity became apparent, for at about middle life he developed delusions of a persecutory nature, and became hypochondriacal, fearful and apprehensive, with decided suicidal tendencies, so much so that at times he required watching lest he commit self-injury.

With such a family, was it any wonder that an individual whose highest form of intellectual attainment was in the direction of Teddy bears and baby dolls, betokening a condition of arrested mental development known as idiocy, was a direct descendent?

The Inexorable Potency of Heredity

This illustrates the fact that in the search for a causative factor in cases of insanity we are, in the vast majority of cases, unable to point to any one prominent episode in the unfortunate individual's life, but must remember that the disease is the result of a long conspiring sequence of events, pre- and post-natal in character; that mental aberration comes not by chance, but by laws which are inexorable and immutable. Punishment which so quickly follows a breach of the physical laws makes us more wary of their violation, yet, in the world of psychic life we become more careless because the ill effects of disobedience are more slow in onset and more insidious in their appearance. But we can no more escape the one than the other.

To illustrate further the tyranny of antecedents, but in which vice as recognized by the popular mind was not so active as in the former case, I will briefly describe

another patient who also came under my care.

The Factor of Decadency Exemplified

During a return voyage from the Continent, a highly cultured young lady suddenly began to manifest in her disposition a radical change. She acted in a suspicious manner toward her friends and relatives, became seclusive, reticent, and peculiar in her general behavior, to such a degree as to create comment from her associates. One morning she apparently sank into a condition of stupor, from which it was impossible to rouse her, even for the purpose of taking nourishment. For several days she lay perfectly motionless, absolutely insensible to any form of external stimulus. To sustain life, mechanical feeding was resorted to by her nurses. Except for the noticeable movement of breathing, she lay as one dead.

At the expiration of about two weeks, the pendulum of her existence swung in the other direction. Awakening from her stupor, she now experienced a condition of extreme excitement. At alternating intervals the delusion seized upon her that she was a prima donna, captain of a ship, ballet dancer, or public speaker, in harmony with which she would practise voice culture, utter commands, execute fancy steps or strike an imposing attitude and declaim. So through the usual routine of the particular form of mental aberration from which she was suffering did the manifestations conduct themselves. An investigation of her personal and family history brought to light adequate causes.

The pitiable victim was simply the logical result of two people whose essential defects resulted, and always would result, in a combination lacking robustness. In other words, the parents would always produce children with enfeebled nervous resistance, which handicap would fit them poorly for the blows of life.

The mother was a nervous, irritable, hypersensitive woman, consumed by feverish envy and fretting over social ambitions and aspirations, at other times brooding deeply over the graves of buried hopes. A devotee of society, her so-called pleasure

became hard work. Frequent attacks of migraine and nervous prostration would force her into seclusion. The father was of tuberculous tendency, with the eager, active, sanguine, intense, impulsive disposition which accompanies the same. There was a lack of repose and breadth. He manifested little self-knowledge and less self-control. His one form of "religious" activity was the worship of the golden calf. In this one direction he bent all of his energies. In dealings with his fellow man he was distrustful, suspicious, and hypocritical.

The education of the daughter was conducted upon lines to attract the opposite sex in the matter of accomplishments. The affective side of her nature was cultivated, and the atmosphere of social life she breathed was in no wise strengthening to the enfeebled nervous resistance she had inherited. A broken matrimonial engagement found her unprepared, resulting in an overthrow of mental stability.

Evil Results From the Marriage of Neurotics

That pernicious results are directly traceable to the marriage of individuals suffering from some form of neurotic disease is obvious in the children. So evident is this fact that in some states the marriage of epileptics is prohibited by law, although, unfortunately, such laws are seldom if ever enforced.

Sad indeed is the condition of a child upon whom this disease has set its seal. Never free from the fear of an impending attack, the poor victim's activities in life are narrowed to well-defined limitations. Danger to life and limb never desert him. The attendant furor, during which he may run amuck like a frenzied Malay, renders him a menace both to family and community. Mental and moral deterioration will ultimately place the stamp of madness upon him. He is a product of prenatal conditions over which he had absolutely no control, the resultant combination of an unwise union of two people actuated by purely selfish motives.

The afflicted child whose limbs jerk spasmodically so as to render walking impossible is only another illustration of the

sins of the forefathers being visited upon the children.

Beware of "Affinities"

Less obvious, more insidious, but none the less detrimental to the robust development of mentality, is the union of so-called "affinities." Obsessed with emotional peculiarities, overwhelmed by temperamental eccentricities, impelled by impulses indicating impaired judgment, increased susceptibility to depressing or exalting stimuli, and intolerant of moral discipline, such persons are strongly attracted to each other, by pride of opinion and conceit of superiority. Already they are manifesting a degree of misanthropy which tends to alienate them from sympathetic communal relations, which is often conducive to mental aberration in its incipency.

A combination of such preformed mental proclivities must inevitably find an exaggerated expression in the offspring. Thus it is no unusual thing to trace the causative factors of many cases of insanity to these very conditions. An illustration of the operative effects of such a cause will serve to point out the salient features.

A Warning Example

The parents of the patient possessed mental characteristics essentially as described above. One was an actor, the other a musician, both of more than average ability and of well-established reputation in their respective professions. The artistic temperament was highly developed in both, as was pride of opinion and conceit of superiority.

Their son, an only child, was looked upon as an unusually intelligent boy, but was extremely sensitive and inclined to effeminacy. He lacked the robustness and virility of the strong type of boyhood. At the age of the transitional period from youth to manhood, he began to manifest noticeable peculiarities of conduct. Never loquacious, he still less often addressed himself to his friends or relatives, seeking seclusion on every possible occasion. Moreover, he became careless in his attire and personal appearance.

Later he was observed to assume attitudes as though engaged in listening to

imaginary voices and his lips moved as if in conversation, apparently reacting to hallucinations. His memory became faulty, as it was noticed that he seemed unable to recall where he placed various articles and experienced some difficulty in naming the day of the week, month of the year, or whom he had recently met. Delusions of a religious nature began to develop. At times he stated that he was the Son of God, with a special mission to perform in the world. So the condition of aberration progressed until it was found necessary to confine in an asylum, as an antisocial unit, the poor victim of mismated individuals. It was only the beginning of the end.

Frequently the lamentable results of such matrimonial combinations may remain obscure for one or two generations, only to assert themselves in the third.

Accentuation of Defects in Consanguineous Unions

Consanguineous marriages furnish notable examples of the breeding to degeneracy. History has recorded many instances of mental insufficiency emerging from the accentuated family weaknesses through intermarriage. Nor has this tended to constitute the disease a fashionable one. A deep-rooted feeling of disgrace is attached to the outbreak of insanity in any family, no matter whether they be rich or poor, high or low, and an irresistible desire is always evidenced to conceal the misfortune, to the point of making strategic statements. The real disgrace lies in the cause, and it is only by impartially recognizing the cause and eliminating it that we can ever expect to retard the progress of insanity.

Dangerous Habits of Thinking

Instances can be cited, almost without number, of the disastrous results to the offspring resulting from injudicious habits of thinking, doing, and feeling of our forefathers. This is true of the physical as well as the psychical life of the individual, for an inherited feeble constitution which, in the grinding struggle for existence, becomes exposed to harassing responsibilities, shocks, vexations, disappointments and complex adaptations to circumstances, is

already predisposed to some form of mental or nervous malady.

Strength of mind depends upon strength of brain, which, again, is influenced by bodily conditions. The consciousness of some form of inherited weakness, which is so strongly entertained by many persons, the knowledge that he is a member of a certain family, with traditional unstable mental characteristics, conveys a haunting fear of the enemy in the camp. Introspection makes him emotional, depressed, and morbid. The thought of constant companionship with this threatening demon which may cause the sacrifice of cherished hopes of success in certain spheres of activity becomes a prominent factor in his ultimate undoing. Hence arises the necessity for an early recognition of the mental habits conducive to mental instability, which, by proper correction, may avert disastrous results.

The Spoiled Child

The impetus received from inheritance toward mental oblivion is only too frequently stimulated and nurtured by the very people directly responsible for the condition. Unhealthy tendencies in the mental or physical constitution of the child are aggravated and enhanced by improper associations or training instituted by the indulgence of dangerously solicitous parents. The "spoiled child" is a household cognomen. Only after he is irremediably spoiled is there a terrible awakening to the vicious course of training in which lessons of self-control were totally absent.

Proper educational methods will do much to obviate the mental quirks and twists which bias to irrational social relationship. The study of the natural sciences, recognition of inexorable physical and moral laws, together with a sense of obligatory compliance with those laws, habits of right thinking, correct judgment, and mental grasp of logical sequences will do more toward establishing a sound mental equilibrium than all the expert knowledge of the dead languages.

Suppression of overwhelming egotism, passionate outbreaks, and emotional storms, with a correct conception of the altruistic

principles essential for the unification of families, communities, and nations, will do much in the matter of offsetting and counteracting the ill results of psychical lesions. Learning to unlearn, ceasing from evil, persistence in well-doing, and continual exhibition of virtuous conduct will build up a healthy mentality the very robustness of which will sidetrack pernicious inherited tendencies.

The Newer Way of Combating the Evil

The narrow militarism which has in the past characterized the treatment of various forms of psychoses, and the cajolery to which the victims of nervous and mental diseases have been the subjects, has given way to more intelligent and scientific methods. It was as unreasonable to blame such an individual as a person suffering from typhoid fever or pneumonia.

The business of the physician is to recognize the symptoms and to be able to correct the altered functioning process caused by the lesion, whether physical or mental. In physical diseases this is accomplished by the encouragement of already existing normal conditions, to treat the lesion as an intruder, and to cast it out by sheer healthful activity. We know that in cases of organic diseases other parts of the same organ will perform increased work in order to maintain bodily equilibrium; in other instances different organs will contribute their proportion of increased activity. Who has not watched the encroachment of healthy tissue around an open sore, such as a burn causes?

The treatment of physical disease in the hands of intelligent doctors consists mainly in the maintenance of and, if necessary, the increased exertions of robust functioning power, with the removal of all hindrances to this end. This is in all essentials the method which is coming more and more into use by those skilled in its exercise, by increased insight into the causes of mental diseases, for their amelioration and eventual cure. As in the diagnosis of visceral disease we are able to place our finger upon and describe the particular part that is affected, so, by a process of psychoanalysis, are we able to trace back, from the end,

products of mental disease to the origin of the disturbance.

The Rational Method of Dealing With Psychoses

Having determined this, the next step is to lead the sufferer along such avenues of thought as to open his mental vision to some degree of intelligent insight into his aberrated condition. Education conducted along psychic lines should then be instituted, the introduction of robust and healthy emotions, desires, tone-feelings, volitional activities, and correct judgments, in place of the compromising mental constellations which found their initiation on the threshold of infancy.

Thus the abnormal emotional interests and fruits of desire which had diverted the current of thought and action into wrong channels may be corrected, resulting in more symmetrical and unified development. The orbit of the psychic life will be enhanced, and freedom from the tug of an evil spirit, which came as a birthright, make itself known. Compelling impulses which were overwhelming in force will thus be side-tracked or overshadowed by the energetic robustness of the newly fostered mental acquisitions. New arborizations and constellations of ideas will accumulate, which will render easy a mastery over the older instincts. The old habits of introspection, which were morbid and depressing, will yield to a self-scrutiny which will teach the real value of fears and apprehensions that once appeared as gigantic obstacles, and the dead hand of his ancestors will release its hold. New enthusiasms will arise and will again sit upon its usurped throne.

Constant watchfulness and vigilance, with painstaking care and effort on the part of the physician and patient, are essential for success. Tact, patience and sympathetic understanding are prerequisites for the institution of this treatment. Nor can such work be accomplished without the expenditure of much time. There is no such thing as a shortcut to satisfactory results. Months and sometimes years are necessary to establish a cure. Nor is this to be wondered at when we consider that

the psychosis can date its beginning at the threshold of the life of the individual and has found its growth and development during the succeeding years. In orthopedics a protracted period of time is necessary for the straightening of a crooked limb, and if this is worth while for a member of the body, how much more desirable for the straightening out of a twisted mind, with a corresponding growth in capacity and ability.

Importance of Individualistic Psychology

The institution of such an effective course of treatment presupposes an individualistic psychology. For years past the plan has been to group certain symptom-complexes under general headings, without reference to cause and particular individual psychology, totally ignoring the obvious fact that every psychic phenomenon must have a psychic cause.

Delusions, hallucinations, illusions, peculiarities of volitional impulses, and emotional excitations do not arise independently of the characteristic mental attitudes of sane moments of the individual. Patient inquiry will always yield the information that they are the manifestations of previously formed mental compounds. These compounds were probably suppressed because they were unacceptable to the good judgment of the person entertaining them. Being only inhibited but not cast out, or, in other words, being only disassociated, a process of reassociation is introduced when a condition of mental enfeeblement is introduced from some cause or another. Thus in every case that we undertake to assist, it is essential thoroughly to understand the psychic processes which have led up to the phenomena presented.

The present facilities at hand in our state institutions render this mode of treatment, which is the only intelligent one, a matter of absolute impossibility. Where a physician has as many as some five hundred patients under his particular care, personal attention to each case is obviously impracticable, for the time at his disposal will not permit of more than the merest casual scrutiny of each patient, and individual study is, of course, impossible.

Fatal Errors In Medical Training

By T. D. CROTHERS, M. D., Hartford, Connecticut

EDITORIAL NOTE.—Dr. Crothers' article was suggested by an editorial in the February number of "Clinical Medicine," entitled "The Strain on the Modern Student." It explains why so many professional men, especially physicians, become drug habitues. This is an article which every medical man should read.

A VERY suggestive editorial in the February number of CLINICAL MEDICINE, entitled "The Strain on the Modern Student," calls attention to a field of causes which has not yet been recognized.

Sanatoriums for mental and nervous diseases and for the treatment of drink and drug neuroses under treatment have constantly an increasing number of highly trained medical and professional men; men who in early or middle life are invalids, broken down, addicted to the use of drugs or spirits, neurasthenics, and suffering from a great variety of nameless disorders. Often they exhibit startling weakness and mental and physical degeneracy, pitifully fighting against poverty, disappointment and losses, for the recovery of well-being.

Physicians in charge of these institutions have been surprised at this extraordinary phenomenon, and some of them have published statistics as to these victims, and more particularly of the physicians falling into this class, these seeming to be more numerous proportionately than any other professional men as inmates of these places. In an estimate made by a physician familiar with private sanatoriums in England, he concluded that at least 10 percent of the medical profession used narcotic drugs and fully 40 percent were spirit drinkers, including both moderate and excessive users.

Physicians Who Are Drug Users

Many of the quack institutions of this country where diseases of this kind are treated report that 40 and 50 percent of their patients are physicians who are spirit and drug takers. Others, more conservative, place the figures at 20 percent.

In an experience of more than thirty years in the treatment of spirit and drug neurotics, fully 22 percent of all patients

were physicians. This estimate is based on the history of about 4000 patients, and varies from year to year. Some years a much higher percentage of physicians appears. The last few years the number has been steadily increasing.

Whatever the exact figures may be, there are unmistakable indications that medical men suffer from spirit and drug addictions to an alarming extent, and this fact is sustained by a great variety of evidence, not only in public hospitals, but in studies of diseases and disorders of medical men in certain sections of the country.

While this fact has been stated before, and is not new, a great variety of causes have been assigned, the principal one being nerve-strain and pressure to get on in the profession. One author believes that it is ill training and the hardships encountered in the endeavor to meet the demands of the profession, extraordinary efforts to become self-supporting, and similar strains of modern life. These no doubt are general causes, but there are other conditions back of them, and these are becoming more dominant year by year.

It is a curious fact that a large number of medical men who are spirit and drug addicts are literary graduates from some of the best colleges in the country, and their first use of spirits began in college life, probably from contagion of surroundings and in some instances, possibly, under the strain of trying to keep up with their classes.

A Delusion That Has Wrecked Lives

There is a common belief in all the larger colleges that the effect of alcohol on the brain is to increase its vigor and capacity, enabling one to do what he could not without its use; hence it would be perfectly natural to resort to it on every possible occasion to

bring out latent qualities of the body and brain besides for the sake of pleasure. This unfortunate delusion has wrecked many a good man in later life.

The same theory prevails in nearly all the medical colleges, particularly those that are supposed to represent the most advanced studies of medicine. The professor of therapeutics still teaches that alcohol is a stimulant and that its moderate use is safe. Its tonic and food qualities are mentioned at some length, but no warning of any danger is added. Even opium is regarded as a safe drug in the hands of trained men. And this teaching is reiterated as if it were a conclusive fact and beyond all question. The student is made to believe that contrary claims are simply the views of enthusiastic reformers and not to be seriously considered.

The student with a literary training comes literally infected to the medical college, and this infection grows, is fostered, and fixed. After he has been in active practice, this infection materializes into a distinct neurosis, first for spirits, then for opium and its compounds. Later a terrible awakening follows, and then a great effort to recover is made.

Physicians of Neurotic Stock

Another class of physicians comes from neurotic families. They too have had all the advantages of extreme culture and training. Early in life they discover that alcohol is a most attractive beverage and furnishes relief in the most satisfactory way; by and by they become addicted to it; then, finally, they drift off to drugs to cover up the effects of alcohol. Often they already begin this practice in college, and during the first years of their practice it is cultivated in the effort to secure a standing and reputation in the profession.

There is a third class, that of ill-trained men, who turn to alcohol for relief, vigor, and strength; and they, too, become addicted, defending their habit with great earnestness. Occasionally these men recover before chronic conditions come on, but usually, like the others, they go down to ruin.

There is a fourth class of medical men, namely those who have previously been total abstainers, who suddenly, from traumas—mental or physical—or from some

great bodily depression following disease, turn to alcohol and find it a grateful remedy and continue its use.

A number of medical students or recent graduates have returned from a European trip with a distinct craving and fascination for wine, beer and spirits which has grown into a neurosis. Whatever they may have learned abroad, they come back physical wrecks, believing that wine, beer or other form of alcohol have a food and tonic value which they need and which will enhance their efficiency and vigor in the future.

The most highly trained literary and medical men are the first to break down, and when under treatment they are the most difficult to handle because of their egotistic and degenerate characteristics. Their one-sided training has wrecked them. While able to pass all examinations and take prizes as students, and to become learned medical men in their communities, their egoism has destroyed their ability to judge wisely of their limitations and the necessary care they should take of themselves.

Dangers of False Teaching

The false teachings both of the literary and medical colleges concerning alcohol and the care of the body materializes in middle life, and they perish. The names of the diseases causing death give no intimation of the virtual suicide and their stupid self-neglect of the years gone before. The startling mortality among physicians is not due to overwork and mental strain, but to bad training, reckless living and neglect of the commonest hygienic rules for body and mind.

A number of men go into the profession heavily handicapped by overtraining. Their apparent superiority to others in the same profession materializes into an egoism that covers up all their student impulses. Henceforth they live in the past and dwell on their experiences and teachings, and they retrograde. The chagrin and disappointment in finding that others who have had less opportunities are passing him by and securing the prizes of the profession brings on pessimism. Then come spirits and drugs. Most of the highly trained medical men seldom continue as students and are rarely heard of in later life.

This is not the case in the legal profession. The egoism of a very highly trained man soon wears off in the rivalry of everyday practice. He must come down to the level of the work of today and meet his rivals of all degrees on their respective planes before his supposed superiority can obtain a permanent footing. He must make good and prove his knowledge and application of the law. His clients and his judgment are constantly brought in question. It is not so in medicine. The confidence of the patient must be held by realities which do not require the strain and stress.

In the literary world the same conditions exist. Education, miseducation and piling up of knowledge of useless facts bring on disappointment and chagrin which end in drink and drug neuroses.

Education and Hygienic Living

The sanatorium physician finds that education is no bar to mental diseases, and the great confused plan of how to train medical men, from the highest colleges down to the lowest, seems to have failed in a most important particular.

Men whose medical knowledge is of the highest character often live on the lowest plane of neglect and ignorance of the application of the laws of hygiene. Brain and nerve specialists are seen in clubs at midnight, drinking and smoking and doing many things that reflect on their all-around knowledge of how to live.

Distinguished teachers often appear suffering from diseases resulting from the grossest neglect of diet, sleep, exercise, and from air starvation. They too, like medical men, have had the wrong mental twist to their training—overtrained in some directions, undertrained in others; and their energies are exhausted in early or middle life, and they are gone.

It is not more training we need for medical men, but it is training that can be applied in their own lives; not laboratory and hospital experience, but home work; training to develop both body and mind and to keep up the student enthusiasm that never falters, but grows brighter with the years.

Drink and drug neuroses are the quicksands in front of every medical man who fails

to realize his capacity and to apply the great doctrines of hygienic medicine to his everyday life.

Dr. Osler's statement, that the best work is done before 40 years of age in the professional world, was all unconsciously a most scathing arraignment of the faulty educational methods of today. The strain and stress that will force the student into a degree of apparent efficiency, at the expense of his vital resources and longevity, is wrong in every sense.

If culture and training have unfitted the man personally to live the highest kind of a natural life, they are false and deplorable.

No "Dead-lines" if Training Were Right

Another statement carries with it an equally sad reflection on educational methods, namely, that the dead-line of the highest work in the clerical profession is between 40 and 50 years of age; after that there is a steady decline. If the training were right and the education were rational and scientific, there would be no dead-lines and the man would keep at work for three score and ten years without any faltering.

If our educational work in medicine and other departments were developed along rational plans, the best work of individuals would never be limited to the first forty years. If medical colleges taught the real living truths that would make physicians and teachers, there would be fewer mental diseases and seldom if ever a drink or drug neurotic.

The present rivalry and strain in the profession will disappear when the colleges train the real doctor, whose life is an illustration of the work he is doing; whose life is an exemplification of the highest degree of health and vigor. The strain on the modern student should not exist.

Our actual knowledge of spirits and drugs should be taught and will be in the near future.

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[The man of average intelligence and culture has an average knowledge of many subjects; but if one wants particular information on any single subject he goes to the specialist in that line. Holmes's beautiful illustration in "The Autocrat" will be re-

membered. Dr. T. D. Crothers has had special opportunities for studying alcohol and drug habitués, and has so used them as to win a reputation that is not limited to the New World.

While many of us know or suspect some one or more of our colleagues as resorting to

the habit drugs, Dr. Crothers has treated and cured many such victims. His warning is prompted by a knowledge of facts we only guess at. His verification of the warning given in our February editorial carries a weight that would be afforded by no other man in America.—Ed.]

Nature Brings Tribute to Medicine

By VICTOR ROBINSON, New York City

EDITORIAL NOTE.—This beautiful little article contains the opening paragraphs of Victor Robinson's essay on "Hasheesh." Many of our readers will certainly desire the work in its entirety. It may be obtained by sending \$1.00 to Mr. Robinson, addressing him at 12 Mt. Morris Park, West, New York City.

AILING man has ransacked the world to find balms to ease him of his pains. And this is only natural, for what doth it profit a man if he gain the whole world and lose his digestion? Let the tiniest nerve be but inflamed, and it will bend the proudest spirit: humble is a hero with a toothache! It is doubtful if Buddha himself could have maintained his equanimity with a bit of dust on his conjunctiva. Cæsar had a fever—and the eye that awed the world did lose its lustre, and the tongue that bade the Romans write his speeches in their books cried like a sick girl. Our flesh is heir to many ills, and, alas! when the heritage falls due. Even pride and prejudice are then forgotten, and Irishmen in need of purgatives are willing to use rhubarb grown on English soil, while the foreign colombo, gathered by the feral natives in the untamed forests of Quilimani, is consumed by ladies who never saw anything wilder than a Fabian socialist.

The modern descendants of Hippocrates draws his materia medica from the uttermost ends of the earth: linseed from busy Holland and floreted marigold from the exotic Levant; cuckoo's cap from little Helvetia and pepper-elder from ample Brazil; biting cubebs from spicy Borneo and fringed lichens from raw-winded Iceland; sweetflag from the ponds of Burmah, coto-bark from the thickets of Bolivia, sleeping nightshade from the woods of

Algeria, brownish rhatany from the sands of Peru, purple crocus from the pastures of Greece, aromatic vanilla from the groves of Mexico, golden-seal from the retreats of Canada, knotty aleppo from the plains of Kirghiz, fever-tree from the hills of Tasmania, white saunders from the mountains of Macassar.—Idols are broken boldly nowadays, but the daughter of Esculapius does not fear, for Hygeia knows she will always have a frenzied world of worshipers to kneel at her every shrine in every land.

All the reservoirs of nature have been tapped to yield medicines for man. From the mineral kingdom we take the alkali metals, the nitrogen group, the compounds of oxygen, the healing waters, the halogens, the nitrate of silver, the sulphate of copper, the carbonate of sodium, the chloride of mercury, the hydroxide of potassium, the acetate of lead, the citrate of lithium, the oxide of calcium, and the similar salts of half a hundred elements from aluminum to zincum.

From the vegetable kingdom we extract the potent alkaloid; all things that blossom and bloom, we take them as we list: the broad rhizome of iris, the wrinkled root of lappa, the inspissated juice of aloes, the flower-heads of anthemis, the outer rind of orange, the inner bark of cinnamon, the thin arillode of macis, the dense sclerotium of ergot, the ovoid kernel of nutmeg, the pitted seed of rapa, the pale spores of club-

moss, the spongy pith of sassafras, the bitter wood of quassia, the smoothish bark of juglans, the unripe fruit of hemlock, the fleshy bulb of scilla, the brittle leaves of senna, the velvet thallus of agaric, the balsamic resin of benzoin, the scaly strobiles of hops, the styles and stigmas of zea.

The animal kingdom has likewise been forced to bring tribute to its highest brother:

We use in medicine the blood-sucking leech, the natural emulsion from the mammary glands of the cow, the internal fat from the abdomen of the hog, the coppery-green Spanish-fly, the globular excrements of the leaping antelope, the fixed oil from the livers of the cod, the fresh bile of the stolid ox, the vitellus of the hen's egg, the fatty substance from the huge head of the sperm-whale, the odorous secretion of the musk-deer, the swimming-bladder of regal fish, the inner layer of the oyster shell, the branched skeleton of the red polyp, the dried follicles of the boring beaver, the bony horns of the crimson deer, the thyroid gland of the simple sheep, the coagulated serum from the blood of the horse, the wax and honey from the hive of the busy bee, and even the disgusting cockroaches that infest the kitchen shelves and

climb all over the washtubs are used as a diuretic and for dropsy.

Little it matters by whom the healing agent was ushered in, for mankind in its frantic search for health asks not the creed or color of its medical savior. Pipsissewa was introduced into medicine by the redskins, buchu by the Hottentots, quassia by a negro slave, zinc valerianate by a French prince, krameria by a Spanish refugee, ipecac by the Brazilian aborigines, guaiac by a syphilitic warrior, aspidium by a Swiss widow.

This train of thought brings to mind a passage written by the world's greatest literary physician. "Medicine," said Dr. Holmes, "appropriates everything from every source that can be of the slightest use to anybody who is ailing in any way or likely to be ailing from any cause. It learned from a monk how to use antimony, from a Jesuit how to cure agues, from a friar how to cut for stone, from a soldier how to treat gout, from a sailor how to keep off scurvy, from a postmaster how to sound the eustachian tube, from a dairy-maid how to prevent smallpox, and from an old market-woman how to catch the itch-insect; it borrowed acupuncture and the moxa from the Japanese heathen, and was taught the use of lobelia by the American savage."

Opportunity

By EDWARD ROLAND SILL

*A craven hung along the battle's eage
And thought, "Had I a sword of keener steel—
That blue blade that the King's son bears!
but this
Blunt thing!"—He snapt and flung it from
his hand,
And lowering, crept away and left the field.*

*Then came the King's son, wounded, sore
bestead,
And weaponless, and saw the broken sword
Hilt-buried in the dry and trodden sand,
And ran and snatched it, and with battle shout,
Lifted afresh, he heaved the enemy down
And saved a great cause that heroic day.*

All the Day*

By E. S. GOODHUE, M. D. Honolulu, Hawaii

*If you will, you surely may
Brighten every work-a-day!
Tasks are nearly always easy
If your soul is only breezy;
And you scarcely can grow weary
When your heart is light and cheery—
All the day!*

*If you will, you surely may
Gladden every work-a-day!
Just by praise and joyful singing
Like some bird its sweet notes flinging;
Just by hearty, wholesome laughter,
Echoed back from roof and rafter—
All the day!*



E. S. Goodhue

*If you will, you surely may
Lighten every work-a-day!
Just by dropping care and worry;
Bluster, fluster, rush and hurry—
Just by taking change of weather,
As the wind takes up a feather—
All the day!*

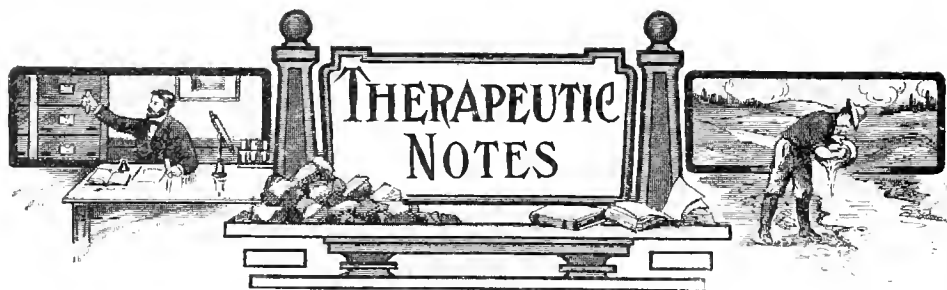
*If you will, you surely may
Consecrate each work-a-day!
Every second of full measure
You may welcome as a treasure;
Every earnest, busy minute,
Will have joy and sweetness in it—
All the day!*

*If you will, you surely may
Shorten every work-a-day!
Time which drags for idle shirkers
Swiftly flies for cheerful workers;
Willing hands can make each burden
Yield to them its precious guerdon—
All the day!*

*If you will, you surely may
Thank God for his work-a-day!
The kind need of constant labor
For ourselves and for our neighbor;
For the round of daily duties—
Tasks and trials, blessings, beauties—
All the day!*

*As you wait, you surely may
In the evening of some day
Find that younger shoulders, bearing
All the heavy loads, are wearing
Burdens, honors, bravely, gladly,
While you rest, half-pleased, half sadly—
All the day!*

*A song for "CLINICAL MEDICINE's big "family" of readers, a large number of whom have by letter asked the writer for a "cheerful poem."



STYPTOL USEFUL IN SPERMATORRHEA

Koenig of Karlsbad announced, some time ago, that the root of *hydrastis* influences favorably excessive seminal emissions. From 40 to 60 drops of the extract [fluid?] taken before retiring will diminish the emissions to an average of once a week.

Proceeding from the idea that medicaments acting astringently on uterine vessels ought to do the same on the excretory ducts of the seminal tubules, the author has tried, during the last few years, styptol "Knoll" (cotarninum phthalicum). His experience shows that this remedy is able to reduce the emissions to an average of once in one to three weeks, no matter how often they occurred before. Together with this effect there is also a decided reduction of the sexual irritability when such is present. First two and then 3 tablets of styptol of 5 centigrams (gr. 5-6) are given shortly before going to bed, continuing for a whole month, and longer if necessary.—*Wiener Klin. Wochenschr.*, 1909, No. 37; through *Pharmaz. Centralhalle*, 1910, p. 280.

ASHES AS AN ANTISEPTIC WOUND DRESSING

Dr. J. H. Keller of Pittsburg (*Therap. Record*, June, 1910), speaking of coal ash as an antiseptic, said that the ash could be made generally useful. "Its lack of cost, the fact that it can be everywhere obtained, simplicity of application, etc., should commend it to all physicians," he said.

"The ash from the anthracite coal is neutral," continued Dr. Keller. "It is sterile and without any irritating effects upon wounds. It is said that when sifted through a flour-sifter it is a soft powder.

It is absorbent and easily adjusted to discharging wounds. When so applied, it quickly absorbs the pus or other secretion, becomes soft and doughy, and helps to immobilize the part.

"Unlike when the gauze is used, the absorption is more perfect and the surrounding tissues are thus spared the corrosive action of the pus. In varicose ulcers, discharging sinuses or abscesses, it is said to meet the requirements better than a gauze dressing."

ACONITE POISONING SUCCESSFULLY TREATED

Accidental aconite poisoning occasionally occurs in India as a result of an overdose of agni-kumar, a preparation described in the Yajur-Veda, and holding a high position among the drugs in the Yajurvedic pharmacopeia. It is given by native physicians in acute indigestion and other gastrointestinal disorders, occasionally also in fevers. Two such cases are reported by M. H. Bhagat, in both of which he saved the victims. Bhagat is quoted, in *Practical Medicine* (Nov., 1910) substantially as follows:

A man of 24 years took a dose of agni-kumar at 8 in the morning for an attack of colic. He felt better, and took another dose at 11 o'clock, after his usual meal, when he went to his office. At noon he became restless, perspired copiously, complained of dimness of vision, and felt unable to work.

The doctor was called at 12:30 p. m., who found the following symptoms: Face anxious, very restless, constantly changing his position, skin moist, temperature subnormal, respirations 15 per minute, pulse small, irregular, hardly perceptible, beating 68

per minute. Mind clear. Complained of severe "twisting" pain in the stomach.

The second victim, seen one week after the foregoing, showed nearly the same symptoms, except that the pain in the epigastrium was of the greatest severity. Tingling and numbness were noticed all over the body. There was no diarrhea or vomiting in either case.

Treatment was as follows: Atropine sulphate, 1-4 grain, was injected hypodermically, hot-water-bottles were applied to the abdomen and extremities, and the following dose administered:

Spir. ammonii aromatici . . . min. 5
 Spir. vini gallici min. 40
 Spir. atheris min. 5
 Liq. strychninae min. 3
 Tinct. digitalis min. 3
 Aquæ menthae, q. s. ad . . . drs. 4

This dose was repeated every half hour till the body-temperature became normal. Strong coffee also was given at frequent intervals.

In the two cases it required four and six hours respectively for recovery.

HANDY SOLUTIONS FOR SURGICAL USE

According to *The Medical World* (Dec., 1910, p. 508), iodine in 1 : 500 solution; zinc sulphocarbolate, 1 : 80; a saturated solution of boric acid; and chloride of zinc, 1 : 15, constitute good solutions to keep on the dressing table or to carry in the emergency satchel. They may be used for the cleansing of wounds, and also for a variety of purposes which will suggest themselves to those doing much wound dressing or emergency surgery.

HEMORRHAGE OF THE NEWBORN

Lespinasse and Fisher have collected six cases in which transfusion was performed for hemorrhage of the newborn, including one case of their own. In four cases recovery ensued. In the others death occurred eight and nine hours after the operation. In all an immediate cessation of the hemorrhage was noted, with marked increase in bodily vigor. Both fatal cases were syphilitic. In both of these the immediate effect of the operation

was excellent, but the infection proved too virulent to be overcome by the bactericidal elements of the father's blood, which was utilized for transfusion.

AN EFFECTIVE REMEDY FOR CAPILLARY BRONCHITIS

Dr. W. R. Joblin of Porter, Oklahoma, writes us that he has been using a combination of 1 part of calx iodata and 2 parts of ammonium chloride in the treatment of capillary bronchitis and pneumonia. He claims to have obtained remarkable results with this combination, which has also been found useful in all the catarrhal conditions of the upper respiratory tract.

PREVALENCE OF NASAL DIPHTHERIA IN INFANTS

In a paper read before the Medical Association of the Greater City of New York, George D. Scott (*Merck's Archives*, Dec., 1910, p. 407), emphasized the fact that nasal diphtheria is not at all uncommon, but that it is frequently overlooked.

The predisposing factors, according to the author, are rachitis and malnutrition. The condition is both primary and secondary, and it passes through three stages: a catarrhal, a fibrinous, and a diphtheritic catarrhal rhinitis.

The first condition is the one most frequently overlooked, and it usually passes away in a few days, leaving the mucosa as sound as before infection. If untreated the membrane in the second condition will pass away in a week or ten days, leaving, however, the diphtheritic catarrh of the third stage of the disease. This condition may persist for weeks, during which time other bacilli may take root in the fertile soil—giving rise to a mixed infection.

Scott insists that during the interval between feedings the child must be given one to three drams of fruit soup or raw pineapple. He condemns the use of the nasal douche because of the liability of carrying the infection into the sinuses. The crusts can often be softened and digested by pledgets of cotton soaked in a 2-percent carbolic-acid solution, solution of hydrogen

peroxide of one-fourth strength, warm olive oil, or a 5-percent solution of argyrol. Strychnine, caffeine, or camphor are used for the prostration, and castor oil, in small frequent doses, for the constipation.

It is advisable not to wait for bacterial confirmation, but to inject 1500 units of antitoxin into the buttocks once, following with 2000 units by mouth. A second 2000 units by mouth after six hours usually will suffice.

THE USE OF SQUILLS IN BRONCHITIS OF CHILDREN

A southern correspondent, who does not want his name to be used, issues a warning against the use of squills in the bronchitis of children. He considers it worse than useless, for the reason that it increases the congestion of the bronchial mucous membranes. We are inclined to agree with the doctor; yet, when the lung of an infant is flooded with mucus a stimulating expectorant may be needed. Wherever there is an acute condition to deal with an irritant is never indicated as it will invariably accentuate the pathologic condition, rather than relieve it. Especially is this true in children, among whom the mucous membrane is acutely sensitive to irritation, even during the subsiding stages of acute bronchitis; but among adults and in approaching old age, where bronchitis does not clear up, and there is still some viscid mucus, raised with difficulty, squills, or, better, scillitin, often works like a charm. It is for this class of cases that the physician should reserve the remedy.

PSYCHOTHERAPY AND THE CLERGY

At a recent meeting of the Society of Medical Jurisprudence, in a discussion of psychotherapy, the Rev. Dr. Remensnyder, as reported in *The Medical Times* for January, 1911, observed:

"Physicians as trained and expert observers of mental and bodily diseases are better fitted than ministers, practised in the cure and care of souls, to discern the

origin of disease and to remove it. Every alert physician practises psychotherapy more or less every day of his life. As to a clerical clinic, I do not believe in such an attachment to the church. Sensible people say: 'What is the matter with the church that ministers are leaving their spiritual calling to meddle with the practice of medicine. We will go elsewhere than to the church for our religion.' And they will, and will be right in so doing. Let us each keep to his own sphere, and it will be far better for our respective professions and for the highest good of your patients and clients and of our members."

POISONING WITH GIPSY NUTS

The Lancet reports a fatal poisoning, of a boy of thirteen years, who had eaten "gipsy nuts," the seeds of goat's-beard, *tragopogon pratense*. The symptoms: Unconscious, cyanosed, pupils small and inactive, pulse small and quick, breathing very rapid, crepitation over both lungs. These appeared two days after eating the seeds, preceded by headache, vomiting and purging. Temperature 101° F., rising before death to 104° F. The treatment was ineffective, because the advisers did not know what poison had been taken and were not versed in their art sufficiently to meet the symptoms presenting. Death occurred the evening of the day he was taken ill. Examination of the gipsy nuts failed to detect any alkaloid in them. The autopsy was negative.

ATROPINE IN HEMORRHAGE

In a recent number of *The Medical World*, Dr. J. R. Smith of Missouri suggests that a full dose of atropine followed by calomel and saturated salt solution would relieve engorgement of the lungs without the loss of the red blood-corpuscles. He also says: "In internal hemorrhage, show me a single drug that will compare with atropine—i. e., in hemorrhage of the lungs, bowels, uterus, nose, or any place that you cannot reach by local applications."

Further on he says: "In placenta prævia with a full dose of atropine hypodermically

you have neither the dangerous hemorrhage nor muscular rigidity of the neck of the uterus. Can you show me anything to equal it there?"

DIPHTHERIA CARRIERS

In an epidemic of diphtheria at Crewe, McDonald (*Lancet*) found 90 persons who were not themselves affected but harbored the *Loeffler bacilli* in throat, nose or ear. It was shown that these persons communicated the disease to others.

ARE THE COAL-TAR ANALGESICS REALLY HARMFUL?

Dr. U. S. Boone, a St. Louis physician, contends that they are not. He has recently issued a pamphlet to contradict the accepted view, that acetanilid, antipyrin, and phenacetin are extremely dangerous drugs to use. He claims to have written to every hospital and sanitarium in the country, and the replies received indicated that in twenty-five years there had been observed only 31 instances of untoward effects, and not a single death. The bad effects, furthermore, resulted from excessive dosage, as a rule, and only in a few cases from idiosyncrasy. His conclusion is that the three drugs in question are not at all harmful when properly used, and positively are not habit-forming.

TREATMENT OF MEASLES

Servoss, cited in *The Prescriber* for December, 1910, discusses the treatment of measles. In the first place, good hygiene and attention to the bowels are of utmost importance. For controlling the fever, he gives a combination of aconitine, gr. 1-134; digitalin, gr. 1-67; and strychnine arsenate, gr. 1-134. For the cough, emetin, gr. 1-67, should be administered at hourly intervals or oftener, care being taken not to produce nausea but to bring the action almost to that point. To stimulate leukocytosis, nuclein solution may be given in small doses. To bring forth a tardy eruption, a cold-pack and powerful stimulation of the vitality should be tried. In this connec-

tion, a combination of glonoin, atropine, and strychnine valerianate, each gr. 1-250, and capscin, gr. 1-67, given every ten minutes, will be followed by prompt reaction. This treatment is also useful in hemorrhagic cases where the vitality is low. To overcome infection, calcium chloride may be prescribed.

APOMORPHINE AND HYOSCINE

By its relaxant action apomorphine prevents the excitement occasionally following the use of hyoscine alone. In many instances it is a better combination than that with morphine, since the latter tends to lock up toxins in the system, while apomorphine tends to let them out. The combination is well suited to cases showing high vascular tension, where the full pulse is characteristic of the sthenic condition; also as an antispasmodic in hysteric and other maladies.

ANOTHER CONSUMPTION "CURE"

The latest is parsnips—just the common every-day garden variety of parsnips. A correspondent of one of our Chicago newspapers is quite sure that this humble vegetable will cure fully ninety percent of all the cases, "at a cost of 2 cents a day," and cites three cases, one of them her own, to prove it!

Of course this proposed remedy will not be taken seriously by physicians, and let us hope not by very many of the laity, for tuberculosis is too serious a disease to be dallied with by "faddists," or treated with crude "specifics." However, what do we really know about the parsnip? Who will volunteer information? What! No one? Then, as a preliminary "protocol" the following may interest you:

The common parsnip is botanically designated as *pastinaca sativa*. The English word is a corruption of the Latin term (*pastinaca*), with the termination *nip*, or *nep*, as in turnip, signifying a tap-root. The parsnip is biennial. The appearance of the plant is so well known that it needs no description. It grows wild in large portions of Europe and Asia, was cultivated by the Romans, presumably also in early English

kitchen-gardens, and was brought to this country by pioneer explorers. If neglected it soon reverts to its wild state, becoming unfit for food, and even poisonous. The wild parsnip is just the common garden plant which has reverted to the original type.

The parsnip is a very nutritious food-vegetable, being particularly rich in carbohydrates, of which it contains 11.2 percent; it is said to be next to sugar-beets as a stock food, especially for cows giving milk.

If we desire to know why parsnips *might* have therapeutic values, we naturally inquire first what makes the plant poisonous in the wild state. It belongs to the large and important natural order, Umbelliferae, very many of the individuals of which contain either a resinous secretion or a volatile oil, or both; the oil gives it poisonous or medicinal properties, and is usually more or less common in all parts of the plant. Besides the parsnip, carrot and celery, other members of this order, well-known for the presence of essential oils, are parsley, fennel, anise, coriander; also hemlock, water-parsnip, asafetida, galbanum, etc.

Parsnip contains an essential oil, and this is especially prominent and powerful in the leaves in its wild form. Its capacity of setting up an acute dermatitis is well known among the laity, and the writer recalls one case, which occurred in his practice years ago, in which a few minutes' contact with this plant while pulling weeds in the garden, "with the dew on," caused an extensive and agonizing dermatitis, involving the entire body and fully as bad as any case of rhus tox. poison he has ever seen. Since this essential oil undoubtedly is responsible for the peculiar and characteristic aromatic taste of the parsnip it may be that it exercises some therapeutic action. Let us not forget that all the essential oils are antiseptics.

DRUG ACTION AS SEEN BY AN ICONOCLAST

W. E. Dixon, the iconoclastic professor of Pharmacology at King's College, London, explodes a bomb under calcium therapy in *The Practitioner*. He asserts that to get effect this drug must be taken subcutaneously. The same is true of potassium and ammonium,

since all these are eliminated faster than they are absorbed. Local applications of morphine are harmless and useless, since it acts only on the nerve centers. Quinine is in no sense a tonic; it poisons protoplasm and lessens metabolism. Organic silver compounds are no better than the nitrate, while organic irons must be broken down and digested before they are absorbed.

Now, *will* you be good!

QUININE AS A PAIN PREVENTIVE

Two Texas physicians, the Drs. Pleth, have announced a new application of quinine. They propose that after an amputation, a 0.5 percent solution of quinine bisulphate should be injected into the principal nerves and around them. This is done as soon as the wound has been closed. The result is that no post-operative pain is suffered, even when hyoscine-morphine has not been employed.

The method has also been utilized in treating fractures and before operating for rectal fistulas, hemorrhoids and fissures. Several syringefuls of the quinine solution are injected between and around the broken bones.

Quinine is nontoxic, easily sterilized by boiling, without impairing its efficacy, and is cheap. The suggestion is therefore of peculiar interest.

VALUE OF IRIDECTOMY IN GLAUCOMA QUESTIONED

In *The Therapeutic Gazette*, Brav discusses the question of iridectomy as a means of treating glaucoma. He does not believe that iridectomy is curative. In fact, he attributes the good effects following this operation to the removal of some fluid from the ball, to the rest in bed following the operation, to the instillation of the eserine, and finally to the general treatment. In conclusion he says:

"It is the experience of every ophthalmologist that eserine is the most effective drug in the treatment of acute glaucoma." This benefit he attributes to the myotic power of eserine, which contracts the iris, checking forward pressure on the cornea.



Gout and Colchicine

IN the number of this monthly (*La Dosimetric*) for last December I published some observations on one of my gouty patients, whom I had treated with colchicine from the very start of the disease. Indeed, I am not one of those who, like Richardiere and Licard, consider an attack of gout as a form of elimination, which one is bound to respect, and who do not give colchicine before the attack has lasted for some fifteen or sixteen days. Even if we are not in duty bound to regard chiefly the pain of this disease, if we have to see to it that the kidneys act perfectly, so that urinary depuration be safeguarded, still, the pain is so atrocious in this disease that the physician must do all he can to relieve the poor unfortunate who is writhing in suffering. And colchicine not only calms the pain, but neither does it exercise any evil action on the renal gland and does not hinder the elimination of the uric acid from the organism.

Let me speak first a word about the pathogeny of gout, and then show that colchicine is really a specific for this disease, whether in its acute attack or in its chronic stage.

The theories of gout are at present quite numerous. In 1897 Gaston Lyon wrote as follows: "The pathogeny of gout is at the present hour as obscure as that of diabetes. Yet certain points seem definitely established, notably, the part which uricemia plays in the production of diverse gouty manifestations. After Termant and Pearson had demonstrated, in 1795, the presence of uric-acid in the articulations of gouty patients, and after Garrod had

shown the existence of urate of sodium in superabundance in the patient's blood, all physicians admitted that gout was owing to an exaggerated quantity of uric acid in the organism and proclaimed that the deposit of urates in the articulations and in various other tissues was the cause, in great part, of the gouty manifestations, especially of the tophi in the joints."

"What is the origin of this acid?

"For about ten years this acid has been thought to be the product of a disassimilation of the nitrogenous matter of our tissues, a result of incomplete oxygenation. This accumulation of the acid in the organism is, therefore, the result of insufficiency of the oxidation in the organs or also, of the insufficiency of elimination, or of both of these.

"At present it is admitted that one part of the uric acid is derived from the nucleins, and principally from the nucleins of the white corpuscles, and that another part forms itself by the way of synthesis within certain organs at the expense of certain materials found in the aliments. One part of this acid is destroyed, in its place, by the leukocytes of the liver, and the other part is thrown out by the urine. It is, nevertheless, the result of clinical experience that in gout the production of uric acid is not exaggerated and that its elimination is neither held back nor diminished. It is naturally concluded that the uric acid is not destroyed in sufficient quantity, and for this reason it accumulates in the organism.

"But though the excess of uric acid be necessary for the existence of gout, it is

not sufficient to produce just this disease, since we find the same excess in other affections also. It is probable that the excess of uric acid would be found in tissues which are liable to be attacked with gout, but which we do not know.

"Do we have here to deal with a local diminution of the alkalescence of the humors, occasioned by a state of fluxion, an inflammation of traumatic or other origin? It is incontestable that the solubility of the uric acid in the humors is dependent upon their degree of alkalescence, and it is not less so when a traumatism, which is easily overlooked because it is so common, may often intervene as a cause of an attack of articular gout. May this be because the circulation is sluggish in the cartilages, which are the places of uratic deposits by preference, or is it because these tissues exercise the same attraction on the urates as they do on the lime, the element which is indispensable for their calcification?"

"The answers that may be given to these questions are only of secondary importance for what they can give us is at most some light on the symptomatic treatment of gouty manifestations, while that which is of the greatest importance is the curative treatment of gout, that is, of its diathesis. From the above considerations it follows that its treatment has to keep in view, as its immediate object, to remedy the insufficient destruction of the normal uric acid in the organism of the gouty individual, then, as an accessory object, to maintain the uric acid in a state of solubility and facilitate its elimination by the renal passages." (*Revue Therapeutique des alcaloïdes*, September, 1910.)

Colchicine fulfills all these conditions.

Physiologic and Clinical Action of Colchicine

Colchicine produces a diuretic effect according to the dose which is absorbed, or a purgative or a superpurgative effect if the dose is an exaggerated one, and that within five or six hours after its ingestion. It produces irritating phenomena in the liver, in the small intestines and in the kidneys, an irritation which exaggerates the functions of these organs and which eliminates from the organism the elements, the

accumulations of which cause an attack of gout. It produces a heaviness in the articulations and an irritation which facilitates the expulsion of the uric-acid deposits which are thus hurried on to the natural emunctories that carry them off.

The following are the conclusions which Mairé and Combemale have drawn from their experiments on both animals and healthy persons:

First: Colchicine acts according to size of dose either as a diuretic or as a purgative, and this in consequence of a congestive and irritative action on the kidneys and on the digestive canal.

Second: The therapeutic effects of this remedy are the same whether given by the mouth or hypodermically, but the effects are more rapid by the latter route, and the dose should then be smaller. The human being is three times more sensitive to this remedy than is the dog. We may fix the human dose at two or three milligrams as a diuretic (1-33 to 1-22 grain) and at five milligrams (1-13 grain) as a purgative.

Third: Colchicine increases the excretion of uric acid and produces congestions on the part of the articular surfaces and the bone marrow, which give place to two orders of interesting phenomena, approaching those of purgative effects, thus accounting for the mechanical action of this substance in certain diseases, notably in gout. It diminishes the uric-acid content of the blood and produces a substitutive irritation in the region of the articular surfaces. It exerts a manifest action on the nervous system of the secreting organs of the glands. It acts above all in irritating those parts for which gout has a marked predilection. This irritation gives place, as I have already said, to a serous diarrhea in the intestines, and in the liver to a very great secretion of bile, and in the kidneys to an abundant diuresis, while in the feces and in the urine we find a great quantity of uric acid.

On the part of the articulation, thanks to the exaggerated vasomotor action, the irritation drives the uric-acid deposits toward the emunctories which carry them out. All these concur, therefore, to the attainment of the desired effect, which is to

eject from the organism all those agents the accumulation and retention of which in the blood determine an attack of gout and the gouty diathesis.

It is not surprising, therefore, that nearly all authors consider this remedy as a specific against gout.

Laborde goes even further and considers colchicine, not only as having a curative, but even a preventive action.

"The result, from a number of sufficient and sufficiently demonstrated facts, is to establish at present this truth in the field of practice, i. e., clinically—although it is yet too much ignored or disregarded—that colchicine, administered in time and properly, provides a powerful and sure preventive for relapsing attacks of gout in gouty subjects. It is enough, at the least premonitory admonition, and better still without waiting for this, to put oneself at less or greater intervals according to the intensity of the relapse on the crystallized colchicine, in doses of three to four granules of one milligram (1-67 grain) each in twenty-four hours, in order to be protected against an attack of and silence the disease for some years." And of this I could cite examples taken from the midst of this Academy." (Académie de Médecine)

Lastly, Dr. Constant of Vittel has proven that colchicine does not impair in any way the excretion of uric acid and does not act unfavorably on the renal functions. There is, therefore, no reason whatever against the use of colchicine at the start of even an acute attack of gout.

Now, what is the dose to be given? In dosimetry this can not be fixed, since we must always administer the medicament in fractional doses, but until effect. So, therefore, in case of an acute crisis of gout we must give the patient every half, or even every quarter of an hour, a granule of half a milligram of colchicine until the pain ceases. We must not stop before the occurrence of the signs of saturation make their appearance, which are nausea, vomiting and an abundant diarrhea.

In the chronic state of gout and as a means of prevention the gouty person is to take from time to time two granules three or four times a day according to its

action on the individual person.—Dr. H. Vigoroux in *La Dosimétrie*, Feb., 1911.

EPISTAXIS TREATED WITH DIGITALIS

According to Focke, in epistaxis there take place in the soft tissues of the nose small rents in the walls of the capillaries, smaller than the blood-corpuscles, caused by venous and capillary congestion and disturbance of blood pressure, and the blood and the plasma thus escape into the tissues. This bleeding serves as a kind of safety-valve arrangement. The blood which extravasates under great pressure forms in the nasal mucosa between numerous fibrous interlacements confluent little "lacunæ." [This is badly termed, and should rather be "cumuli."—GLENER.] This state lasts till the simple epithelial layer becomes seriously infiltrated and then in consequence of pressure fine gaps ensue through which the blood escapes diffusely, as through a sieve.

Among the causes of the congestion in the nose are the pressure of clothing around the neck or waist, and digestive disturbances, with intestinal flatulence which narrows in the room in the chest. The most frequent cause, however, is usually the watery condition of the blood, as it is found mainly in chlorosis.

In at least four-fifths of the cases the local cause of the congestion was, in general, disturbance of the circulation. The treatment consists mainly in the regulation of the circulation in order to prevent a recurrence of the hemorrhage. Errors in diet must be avoided; constipation must be met with cathartics, and then the ingestion of irritating foods such as spices, eggs, and meat must be avoided, and also deleterious beverages, with a total abstinence from the coffee-bean infusion for some weeks. On the other hand there should be free use of vegetables, fruit, butter, milk, and malt-coffee.

In association with this regimen comes for the first days the administration of digitalis, either as an infusion of digitalis leaves or as digitalysatum. The effect of the digitalis Focke explains as follows: The disturbance in the circulation and in

the distribution of the blood is done away with, and the capillary disturbances vanish.—*Pharmazeutische Zentralhalle*, 1911, p. 177.

[Better still, resort may be had to digitalin, selecting a known-to-be-reliable glucosidal form, representing full digitalis activity.—Ed].

DISTRIBUTION OF COPPER IN THE HUMAN BODY

Yazi ascertained the distribution and the total content of copper in the human body, and after many analytical determinations for copper in the different organs of animals and human beings found that the liver in both of these contains far more copper than the kidneys; yet there is no definite relation to be established in this respect between the two organs, as in each of these organs the copper content is subject to great variation. It must, however, be remembered that the copper content in Japanese bodies, on whose cadavers Yazi made his examinations, is far greater than in European, according to Lehmann's analysis. The author traces this circumstance to the fact that the Japanese use copper cooking vessels very extensively and that the edible vegetables contain relatively more copper on account of the greater amount of this metal in the Japanese soil.—*Arch. Internat. de Pharmacodyn. et de Therap.*

INFECTION OF THE URINARY PASSAGES WITH BACILLI COLI

Dr. Karl Franke writes, in *Mitteil. aus d. Grenzgeb. d. Med. u. Chir.*, as follows: The frequent coli infections of the bladder, which occur more often in females than in males, come about, according to some authors, by the way of the urethra. The short female urethra is thought especially liable to it. A majority of authors assume an infection through the circulation, by way of the kidney downward. Dr. Franke called attention recently to the lymph passages leading from the cecum and colon, ascending to the kidney, by which the bacillus may be transmitted. Experiments on animals have shown him that in infec-

tions of the renal pelvis the bladder becomes diseased while the renal pelvis remains healthy.—*Wiener Mediz. Wochenschrift*, 1911, col. 711.

REMEDIES AGAINST SNAKEBITES

According to G. E. Oliver, the natives of South Africa use the leaves of *leonatis ovata* and *leonatis leonurus*, as well as the coat bark of *teucrium africanum*, in the form of an infusion. The leaves of the *leonatis leonurus* seem to contain a hashish-like substance and are smoked by the Hottentots at times. In the other drugs nothing could be discovered which would justify their use as antidotes to snakebite.—*Apoth. Zeitung*, 1910; 1036 in *Pharmaz. Zentralhalle*, 1911, pp. 387-9.

BACTERIA ON COPPER AND SILVER COINS

Dr. Hugo Kuehl has published a work in which he briefly states the results arrived at, on the subject named in the title. The author is unable, from his investigations, to ascribe any sterilizing effects to copper and silver or to their alloys, which can only take the place under the special condition of there being a sufficient amount of a solution of the metals present. By the perspiration and the dirt adhering to it, which certainly constitutes the greatest part of the coating of our current coins, not enough metal dissolves to have any germicidal effect to speak of.—*Pharmaz. Zeitung*, 1911.

INFLUENCE OF RADIUM EMANATIONS ON PLANT GROWTH

Dr. Falta reports some experiments on the influence of radium emanations on plant growth. Grains of oats were placed in a bottle in which were radium emanations and these grains were brought to germination and growth in greater number, and in much shorter time, than similar grains which were put in a bottle without these emanations.—*Wiener Mediz. Wochenschrift*, 1911, col. 708.



Patent-Medicine Makers and Anti-Dispensing Laws

THE question, "Who Manufactures the Nostrums and Patent Medicines," could be more quickly answered if it read, "Who Does Not." My experience of twenty-five years has shown me that to answer the question in its first form I should be compelled to name every general manufacturer of pharmaceuticals in the country from top to bottom, with only one exception. One large house whose name would grace (?) the longer list has gone into the patent-medicine business at first hand, bill-board advertising and all, but of course under an alias like any other crook. A list of the firms and companies doing this class of business should be compiled and sent to every physician in the United States and Canada, for while they are engaged in this contemptible work they are at the same time pretending to cater to the profession whose business they are doing their best to ruin. The practice has been winked at too long. So much for the drug manufacturers.

As for the retail drug interests, which claim to be trying to pass laws that shall prevent physicians from dispensing, really, "it is to laugh." What is a druggist? Well, he is ninety-nine percent dispenser of his own and other labels, and one percent something else. I mean, of course, taking them as they run, good, medium and bad. The average druggist does more prescribing and dispensing in one day than the average physician does in a week.

To illustrate: I was called to attend a boy of four years who for several days had been

treated for sore throat by the nearest druggist, a man of supposed high reputation. The mother, a woman of almost no education, had made the diagnosis, and this druggist had accepted it without question. Then he *prescribed and dispensed* a product of his own compounding. The child was moribund when I reached it and died a few hours afterward. Another child, a baby in arms, was also sick with the disease (diphtheria) and died the next day. How does that kind of work compare with the painstaking care of the dispensing physician?

The men who say that they want to stop physicians from dispensing also say that physicians buy cheap drugs. Now, we who prescribe and dispense, much or little, know that this is *absolutely untrue*. The dispensing physician must have the best drugs, because his success depends upon results which he can only get with the best. It would be "penny-wise and pound-foolish" with a vengeance to do otherwise. On the other hand, many druggists do buy cheap stock, for they know that in case of failure in any given case it will not be they who will suffer in money and reputation, but the physician. And it has been this class of druggists which has been one of the chief factors in causing such a great increase in the number of physicians who dispense.

But these dope dispensers are not even honest in proposing this law. They know that such an act would not be considered by the most ignorant law-making body ever convened in any state, much less passed. They know that if such a law could be passed

it would be declared unconstitutional as soon as it reached a proper court, at least insofar as it applied to physicians. They know that if such a law were ever passed it would include a clause which also would prevent the druggist from dispensing; and that under it no patent medicines could be dispensed. They bring up this question for the sole reason that they may use it as an excuse for libeling physicians who dispense and not because they have any hope of seeing it offered, much less enacted, into law.

But this conduct comes with bad grace from men who push patent medicines with one hand while they reach out desperately for prescriptions with the other. One of this bright class actually sent out an announcement to the physicians in his neighborhood soliciting their patronage, and at the bottom of the circular in large type was this: "Patent Medicines Sold at Cut Prices." Can you beat it? Well, yes, here is one even worse than that. In the window of one of the finest drugstores in the city there was displayed for weeks a sign which read: "Newspaper prescriptions a specialty." Yea, verily, "it is to laugh."

CHAS. G. PURDY.

New York City.

[We have from time to time sworn (softly) that we should eschew this discussion for all time; but it bobs up again and again, and we are reminded from its very insistence that *the medical profession is interested in it*. And why shouldn't it be? It affects the financial nerve, the most acutely sensitive to irritation of all anatomy.—ED.]

MEDICAL EXPERT TESTIMONY

In an old number of CLINICAL MEDICINE I read an article by Brother Snow in which he gives medical expert testimony a rather hard rap. This is not quite fair, because we all are experts (to a large extent) when necessity compels us to give testimony in court.

In the first place, expert testimony *per se* is a pretty hard thing to define, and, candidly, I should like to know just where the distinction lies between that and the ordinary "garden variety" of testimony given by any

physician. From what I have learned, the term is a misnomer and had its origin in the court room, was coined by lawyers, and simply means the testimony of a professional man who is supposed to or does have some special knowledge of the subject in hand. Every physician who testifies is called upon to give an opinion, and that immediately becomes expert testimony.

Doctors certainly are influenced by the side which calls them to this extent, that while all examiners seem to ascertain any deviation from the normal, one man will try to find, for instance, an explanation in the line of heredity and disease, the other fellow, on the other hand, from trauma. This is only natural, since opinions are bound to vary and each side has its own point of view.

Now, as to the doctor on the witness stand. He gives his name, residence and profession; then swears to tell the truth, the whole truth and nothing but the truth. What rot! He does not do anything of the kind. In the first place, he couldn't if he tried and in the second place, if there were a possibility of his doing so, the lawyers would not let him. About all we do on the stand is to answer questions except as to prognosis and etiology, and any statement that may be made to the jury is always or should be prefaced by the words "in my opinion." The court will charge the jury, anyway, that what has been said by a professional man while on the stand is "merely his opinion."

One of the first questions asked is, "Did you make a thorough and complete examination?" And the answer is, "I did."

Well, take it from me, he didn't do anything of the kind. He examined part or parts of the body, but as for examining "thoroughly and completely," no siree!

It has been my privilege to spend a considerable portion of my time in the court room and to listen to the testimony of a great many physicians, yet I have never heard, or heard of, one that had made a "complete" examination. To be "thorough and complete," it would be necessary to examine every single part of each organ or secretion or excretion of the subject. Who ever heard of any man examining eyes, ears, nose, throat,

pharynx, larynx, teeth, sputum, saliva, all the internal organs, gastric juice, urine, vaginal secretions, rectal contents, blood, nerves and nervous system, muscles, skin, hair, etc., etc., in a given case? Yet the examination was "thorough and complete"!

The query will probably arise right here, What is the use of all that, anyway? Smith was knocked senseless, had some bruises on the back and head and got a broken leg, but he is all right and can walk around again as good as ever. Is he all right?

That answer is not a safe one for the physician to make. Go into our hospitals for chronics and look around. What do we discover? Myelitis, hemiplegia, paraplegia, multiple sclerosis, neuritis, traumatic insanity, and so *ad infinitum*. What was the history? Just a blow on the back or head; loss of consciousness, sometimes. "But the doctor said I should be all right in a little while, and one (or several) year later my present trouble came on." And now these victims are more or less helpless, a burden to themselves, their family, the state, living a living death.

I do not mean to go on record as saying that all such cases are the result of trauma—not by any means; but an amazing proportion are, and it is the duty of every physician to make as thorough and complete an examination as possible or else not examine at all.

As for the difference in testimony given, do doctors always agree? No more in the court than in the consulting room. As Mark Twain once said, "were it not for difference of opinion, every man would want the other man's wife; then there would be the devil to pay." And there is good reason for this variance—look at our textbooks! Brown's book, for instance, says "appendicitis cannot be caused by trauma," but Author Smith just as positively asserts that it can. So, then, Dr. Jones takes the stand on behalf of the plaintiff and swears that it was the trauma that caused the appendicitis—in his opinion. He had studied "Smith." Now Dr. Black goes on for the defendant and swears that the trauma did not cause that appendicitis—in his opinion. He, you see, had studied "Brown." Now, then, which is right? This kind of testimony

sounds to the lay mind as though somebody was lying.

Medicine is not an exact science yet, and never will be, as shown, for instance, by the notable New York case referred to by Brother Snow, in which the alienists swore for insanity on one side and on the other side that the defendant was rational.

The public and the newspapers exclaim: "How is this possible? What awful liars these doctors are."

Not at all! One set of alienists made their examination early in the morning when the patient was rested and still fresh; the other set examined late the same afternoon or evening, and, strange to relate, the findings were different. Try your own reflexes several times daily for a week—the results will surprise you. Only be careful that you don't imagine you have all the nervous and mental diseases in the calendar, and a few more beside.

Much has been written regarding the variance of doctors' testimony, but due regard should always be taken of several things, namely:

1. The condition of the patient at the times of the separate examinations. For instance, Dr. A. testifies that he examined the patient on June 1 (at 7 a. m.) and found him in bed. Dr. B., that he examined on June 1 (at 6 p. m.) and found the patient downstairs at dinner.

2. Dr. A. examines in January and finds one set of symptoms, Dr. B., in July, and finds another set.

Dr. A., specialist on surgery, and Dr. B., specialist on woman's diseases, both examine the patient, a male, if you please. When it comes Dr. B.'s turn to testify, he starts in by saying, as though lecturing a class, "The uterus was bound down by adhesions—." Well, somebody was lying that time—the public were right. However, it's the old story over again: point of view.

Just one more case to illustrate another phase of why the testimony of alienists often differs.

A man was tried recently for the commission of a brutal murder; he shot down his victim in cold blood, waiting for him to come up to the dock and shooting him while he was on a boat. The defense was,

"maniacal depressive insanity." He was indicted for murder of the first degree, but the jury brought in a verdict of manslaughter. That defense saved him from the electric chair, the jury, or some of them, evidently believing he was mentally irresponsible at the time of the commission of the crime.

Now, as to the medical facts as seen in the court room during the trial. The defendant would sit from ten in the morning until one, and from two until five o'clock in the afternoon, and not once during that time look up or move his hands. The best I could do with several days' watching was to catch his eyelids blinking five times one day, and that was the record.

When taken to prison, the clothes the man wore during the trial were searched and I think thirty-four 1-grain opium pills were found in the lining of his coat. That man certainly was a picture of insanity during his trial if ever there was one. There were in that case two sets of alienists—both swore to different stories. What was the answer? When examined by those for the State the accused had had no dope. When examined by those for the defense he had probably had it in plenty. The result was a different picture described by each side, with the man portraying, each day during his trial, the living likeness of the word-picture of his own experts.

Any doctor going on the stand to give testimony has a tough job confronting him. He is bound to displease somebody. Let us, therefore, make the position for all of us as easy as possible by withholding our criticism, especially when we do not know the facts. Were it not for the indiscreet talk among physicians, there would not be the false impression created among the laity. What with "the good there is in the worst of us and the bad there is in the best of us," who is fit to judge the rest of us? "Judge not lest ye be judged."

WM. H. NAFIS.

Brooklyn, N. Y.

TRANSMISSION OF SYPHILIS TO THE THIRD GENERATION

Zieler (*Wien. Med. Woch.*, 1910, No. 17) describes a case of transmission of syphilis

to the third generation. A child four months old, with universal syphilitic eczema, showed a positive Wassermann reaction. The mother had never been ill and showed no signs of existing or cured syphilis. The father had always been healthy and the Wassermann reaction was negative, while it was positive in the mother. The grandmother had been infected with syphilis two years before her marriage.

According to the result of examination, we have here the transmission of syphilis to the infant through the mother, who had latent syphilis but in whom the disease had never become active, and to whom it had been transmitted, on her part, by her syphilitic mother, the grandmother of the infant.

THE SOCIAL EVIL AND IGNORANCE

The articles written by Dr. W. F. Radue and Drs. McDade, and published in the January, 1911, number of this journal, have prompted me to add a few words in the same direction.

I agree with the editor in saying that the most potent factor in the fostering of the social evil is ignorance—especially among the young—about venereal diseases and their frightful consequences. Self-protection always has and always will be the greatest law of nature. Those whose morals will not prevent their violating moral laws will be prevented by a knowledge of the danger to their physical being which such violations entail.

It has been but about a month since I had an opportunity—at a meeting held in one of our churches and to which about sixty of our business and professional men were invited to eat a dish of oysters and to talk over the things which those present happened to think might be for the general good of the town—to bring this matter to the attention of those present. I expressed the opinion that we should have some plan by which no child—boy or girl—should be allowed to finish the common-school days without knowing the names, nature, and the underlying causes of all venereal diseases. I was especially glad that the superintendent of our schools and the president of our school board were present.

At present I do not know how this could best be brought about, whether by legislation with that end in view or by the teachers, aided by the doctors. But it is certainly true that such knowledge would prevent the ruin of many innocent and uninformed boys and girls. The move should be national.

Only a few weeks ago an attorney of our town was informed by a young lady of eighteen years in his private office that a young man accomplished intercourse with her, and that up to that time she was uninformed that there was such a thing in the world; and also that she was entirely ignorant of the means of reproduction.

It is better that our children should know more of the things which prevent their becoming unhappy, even at the expense of a little less book learning.

V. E. LAWRENCE.

Ottawa, Kans.

ETHEREAL CAMPHOR-TANNIN FOR ERYSIPELAS

Being often benefited by articles which are of everyday practical use, written for your journal by practical men on the firing line, it seems proper and almost obligatory for all of us to contribute our mite to the best of our ability. Being one of the "old ones", a graduate of Bellevue of 1876, and in active practice since, various ideas have been garnered which may perhaps be of use to some brother in the work.

One prescription of an unusual combination has been found to be almost a specific when locally applied in erysipelas of the superficial variety. It is not original, having been read in *The Medical and Surgical Reporter* of Philadelphia, many years ago, and it is as follows:

Tannic aciddr. 1
Camphor.....drs. 2
Etherozs. 2

Apply by means of a brush all over the inflamed surface and at least one-half inch beyond the outer margin. It may be applied as indicated for the relief of pain and to arrest the inflammation. Every two to four hours is often enough at first, and as the active symptoms subside, use it

less often. The ether, evaporating, leaves the camphor and tannin as a viscid, whitish colored residue, which should be removed by gently washing with warm water, at least once daily. It is well to caution attendants to avoid proximity to an open flame, when using this volatile and inflammable mixture.

I have often found a rapidly spreading erysipelas causing severe pain and fever to subside after a few hours, the pain being relieved by the first application of this camphorated tannin; and have never failed to get good results from its use.

The advice of the textbooks to avoid cold lotions in erysipelas is disregarded in using this compound, as it is its refrigerant effect to which I attribute a part of its usefulness. This, and the protective covering formed, meet the indications by their anodyne action; beside being decidedly antiphlogistic through reducing the local temperature.

I regret to say the author's name is forgotten, and the exact proportion of the drugs used may not be as originally written. My practice, when dispensing this mixture, was to use about all the tannin and camphor the ether would dissolve, and then add some more, so that the protective covering would be heavy enough to exclude all air.

This remedy might be named "ethereal camphotannique."

A. J. McADAMS.

Harper, Kan.

THE DOCTOR WHO HOLDS HIS PATIENTS

I am an old new doctor, a general, all-around family physician, one who does anything the family may have for a doctor to do. Nothing goes from me to the specialist, as nothing comes from them to me; so we are even, you see.

I commenced in 1877, and have been at it every day since. Specialists were scarce when I began to practise, and what there were, were too far away to be of any service to a country doctor in the far West, as Missouri and Kansas were then. So we were up against everything that came along for the medicine-man; no shifting them

off to the other fellow, as there was no other doctor

Consequently, we learned much self-reliance, and as a necessity had to take everything that came our way. But that was before people knew they had appendixes and were always on the lookout for someone to cut them out. His appendixship was usually willing to shut up and keep quiet after he had a tablespoonful of powdered rhubarb and calomel on going to bed, followed in the morning with a pint of solution of "salts" or a tablespoonful or two of castor oil and turpentine. Mr. Appendix was usually satisfied with this and asked for nothing more, for fear, perhaps, that worse might follow. The death-rate was not worth mentioning—neither was the doctor's fee.

The ovaries and womb in those days were more generally engaged in the useful occupations which they were intended by nature to perform, and did not have so much time to devote to being cut out. They had not become modernized and little cutting was required for them.

So much cutting is a modern fashion, anyway, and more needed by the surgeons, many times, than by the patient. More benefit comes to the cutter than to the cut. Too often, I fear, the surgeon has "cut" on the brain, becomes color-blind and can't see; nor does he want to see any way out except to cut it out.

All belly-aches require an operation of some kind, and, besides, it has become fashionable; any person who has not had something cut out is an old fogey and hardly to be classed among the best and most modern people—they are not up to date.

I was born under a lucky star, perhaps, and was not to be called on to treat appendix troubles, nor ovarian diseases that required the knife. Only those fell to my lot that could be cured with medicine, for in all this time (thirty-four years) I have never had one single case of ovarian trouble that required an operation, and they have all gotten well.

As for appendix trouble, I have never had but one case that required an operation, and that was an abscess and not appendicitis. Some twenty-five years ago patients with

appendicitis died, but since then all have gotten well, and none have been operated upon. If this trouble were so very prevalent all the time, it does seem to me that, doing a general family practice all these years, I should come across a case occasionally.

My patrons have many kinds of belly-aches, but not being very strong on diagnosis, and right up to the top on materia medica and therapeutics and specific and alkaloidal remedies, by giving them a thorough cleaning out and keeping them cleaned out, and giving the indicated remedies in small frequently repeated doses to effect, they all get well or have done so thus far.

One might think from what I have said that I am opposed to surgery and surgeons, but this is not the case. It is the abuse of surgery to which I am opposed. It is the wrongful influence that is brought to bear on too many people by the surgeon, either ignorantly or intentionally, or both.

Acetanilid, either dry or as an ointment, is one of the most satisfactory dressings for sores—whether acute or chronic or open wounds of all kinds, and where not too large a surface is exposed—that I have ever tried. It has many things to recommend it. It is not expensive; it is clean, white, and has no odor; it is a strong antiseptic and an anodyne. There is only one objection to it that I know, and that only where the abrasion is very large; too much of the remedy might be absorbed and make a blue patient; but this is easily managed by not using too much.

M. E. JOHNSON.

Pittsburg, Kans.

SIMPLICITY IN CIRCUMCISION

I want to say a word about circumcision. I perform this operation quite often—usually on infants, sometimes on older persons. I split the foreskin from the end along the top to the back of the glans penis; then this foreskin will drop down, releasing the glans. I cut off and cast away nothing, believing it will be needed in after-life. I think this cutting off was one "mistake of Moses."

H. M. Brooks.

Emory, Va.

[We referred Dr. Brooks' method to Dr. Benjamin H. Breakstone, whose article on "Circumcision" every reader of *CLINICAL MEDICINE* will recall. His statement follows:

"In reference to Dr. Brooks's comment, I can say that, according to his description, he merely does a dorsal incision. I have emphasized in my article that a circumcision to be complete must be so performed as to make it impossible for the prepuce again to cover the glans. I even cite Remondino in his book on "Circumcision," in which he shows that many Jews were able to reproduce the foreskin and thereby escape expulsion from Rome.

The prepuce, like the appendix, is an unnecessary thing and is not needed in active life, as is well demonstrated by the Jews and Mohammedans. It certainly was no "mistake" of Moses to cut a part off, and in his day the technic was as perfect as it could be.

However, we now know that circumcision is performed for cleanliness and the prevention of a great many infections, and as long as the redundant foreskin remains, it does not matter whether there is a large opening in it or a small opening. The skin will be wrinkled just the same, leaving recesses between these wrinkles for filth and bacteria to be cultivated."

Dr. Breakstone's interesting series on "Everyday Surgery" will be resumed next month, with an article on "Appendicitis."—ED.]

PNEUMONIA IN COUNTRY AND CITY

Excuse me, for I don't "butt in" often. This is written upon the impulse after looking over the article on pneumonia on page 367 of the April number of *THE CLINIC*.

I am fully persuaded that I can duplicate Dr. Wolverton's results and am not sure but that I can go him one better, though not as to the total number of cases treated. I have practically entirely a country practice, and with the often well-outlined treatment with the alkaloids, pneumonia has no terrors for me. I don't, in fact, have any, as the cases are nearly all aborted, because, as Dr. Wolverton outlines his

"case typical," I am called before the mischief has progressed far enough to be beyond the abortable stage. I often prescribe without seeing the patient, with instructions to call me if not very much better the next day; and the report is nearly always, "Doing fine."

Now, Doctor Abbott, this is preliminary to the expression of my belief that neither Dr. Wolverton nor myself, nor any other physician reporting these results to you could do the same thing in Chicago or any city of like size, for, as a matter of fact, we should be handling an entirely different proposition. You may have, in Chicago, a typhoid-fever case as outlined in Dr. Wolverton's paper, but you do not always nor often meet such a case of pneumonia, but rather a pneumonia coming on like a case of diphtheria—insidiously and without very marked or violent symptoms, so that when a physician is called he has a well-developed case and one that will in other than a well-fortified constitution overwhelm the patient. Am I right or not? Is the city pneumonia a different affair from what we have in the country, or do we really only have "exposure congestion"; and not true pneumonia?

I have inquired of a number of men canvassing the profession and they all have told me that the use of the "alkaloids" is on the increase. Arbutin and anti-scorbutic tablets are two of my best "guns" and I advise every physician to experiment with them; but I like everybody to stick to the exact truth and not make any exaggerated claims. Then we can always stand up for what we do say.

R. W. WOLFE.

Taylorstown, Pa.

[It is our opinion and experience that pneumonia in city and country are exactly the same disease, attacking people in exactly the same way; but, the resistance of the overworked "captain of industry" or under-nourished clerk is not as great as that of the average country dweller, and so it is possible that the mortality rate may be higher in the city than in the country. Nobody seems really to *know*. What do our readers think?

Of course the hospital cases are not always safe to form opinions about. Too many of the acute pneumonias that fill their wards come from the streets and gutters to make even reasonably good risks, and too many of the eminent professors refuse even to consider the methods of treating pneumonia which have given such splendid success in the hands of men like Dr. Wolverton, Dr. Wolfe, and thousands of others. It sounds iconoclastic, I know, but really I believe that pneumonia is treated better in the country than in the city.

Like Dr. Wolfe, we want the truth and the truth only.—Ed.]

AN AUTOSITIC MONSTER

I am sending you two photos of a monster I delivered a few weeks ago. I think it is classed as an "autositic monster of the sirenomelus variety." The chief factors in this case are as follows:



Front view of the monstrosity

Mother, negress, age 19 years, first labor. Breech-presentation. Fetus about five and one-half to six months; lived half an hour. The greatest peculiarity is absolute absence of any mark of sex or of lower bowel.

J. M. ELDERDICE.

Mardella Springs, Md.

[A "sirenomelus" monster is defined by Gould as one "of the species symelus, in which the lower extremities are intimately fused without the trace of a foot, or, at most, with but a single toe." According to the pictures there are two well-defined rudimentary feet, with two toes on each and a common heel. This case seems to fit better

the variety "uromelus," in which there is more or less complete fusion of the limbs, with but a single foot." Some teratologists would classify this as *symelus dipus*.

This case will remind members of the "family" of the case of *amelus*, the armless



Another view of the same monster

and legless babe reported by Dr. E. E. Allenbaugh of Huff, Indiana, in June, 1909 (pp. 678-679). This child was alive and well when reported, and the picture printed in *CLINICAL MEDICINE* excited the interest and sympathy of many of our readers. We should like to inquire of Dr. Allenbaugh if this child is still living.—Ed.]

AN OBSCURE CASE, POSSIBLY TYPHOID FEVER

Thinking this case might interest some of the readers of *CLINICAL MEDICINE*, I will describe it as well as possible, having kept notes more or less perfectly.

On the evening of December 26, 1909, I was called to see Mr. T. B., a man about 30 years of age. He keeps a feed and livery barn and has a room in the barn where he sleeps, and boards at a restaurant. The room in the barn is dirty, poorly ventilated and very unsanitary.

I found the man apparently suffering from an attack of grip complicated with severe bronchitis. The temperature was 103° F., pulse, 90; respirations normal. He had a tight cough, and complained of soreness of the chest and of aching all over. Physical examination revealed nothing else. I left him some medicine, stating that I should see him again in the morning. In the morning I was informed by telephone that I need not come as he appeared entirely well. I patted myself on the back,

mentally saying, "Good work, old fellow."

I saw the man almost daily after that, not professionally, however—I use his teams when I have more driving than my own horse can stand. When inquiring occasionally, he told me he was doing fine.

On the evening of January 16, he came to my office, stating that he wanted some more "dope" as he was feeling "pretty bum." He complained of headache, aching and soreness all over, cough, soreness of chest, poor appetite, and of feeling tired. I found he had a temperature of 102° F., pulse of 130. That looked a little serious, so I told him to go home to bed and I should come and look him over.

Upon examination, I found the lungs all right, pulse now 125, regular, the first sound a little weak and accompanied by a slight murmur. I found tenderness to pressure all over the body except the abdomen and lower part of chest. Bowels were constipated. I did not make any diagnosis, preferring to await developments. I gave the patient 10 grains of calomel, to be taken one grain every half hour. Also aconitine and digitalin, one granule each in solution, every hour; heroin hydrochloride, gr. 1-12, every three hours for the cough.

In the morning his condition was unchanged, except for free bowel movement and less cough. There was little change in his condition for two or three days, only the soreness of the chest grew gradually less, cough less tight, pulse settled down to 100, temperature ran from 99° to 102° F., appetite was fair, bowels good, urine normal. About this time he began to complain of soreness of his joints, particularly knees and ankles, and soon they were swollen considerably and very tender. Temperature and pulse continued about the same.

I now called it inflammatory rheumatism and treated him accordingly. I wanted to move him to better quarters as he seemed pretty sick, but he would stay, being a very stubborn fellow. In about a week I finally succeeded in getting him moved to a better place and procured a trained nurse for him. Symptoms continued about the same except that the temperature went up to 104° F. in the evenings and he complained of distress around the heart. The pulse got

weak and irregular, went up to 130, no murmur, first sound very weak.

Treatment was symptomatic, with ice-bag over the heart. The pulse soon went down to 100 and became regular. About January 26 the patient began to get delirious, wanted to get out of bed, talked at random, and was hard to control, and I had to give him morphine injections. I tried II-M-C compound, but it did not do as well as morphine alone.

The condition of the patient was gradually changing, assuming more of a typhoid condition. There was some tympany of the bowels, pea-soup stools of foul odor, restlessness, muscular twitchings, jaundice (in spite of considerable calomel dosing). The joints were getting better, no swelling, some soreness and stiffness left. The pulse was from 90 to 100, dicrotic, temperature from 100° to 104° F.

By this time I concluded to change my diagnosis again and to call it typhoid fever. The treatment was cold sponging for temperature, sulphocarbolates, and liquid diet. The sulphocarbolates soon disagreed with him, as did milk. All this time he was delirious, sometimes violent. Early in the morning of February 1 the nurse called me by telephone, saying the patient's condition had changed, and to come at once.

I found him with a temperature of 98° F., pulse of 140 to 150 and very weak. There were no signs of shock, hence I concluded he was having a hemorrhage. So I gave him at once, hypodermically, a full dose of morphine and atropine, applied ice to the abdomen, and stopped all food. The patient stayed weak for a few hours, but by the next morning the pulse was 90, and temperature 102° F. I now procured butter-milk, and as he could not keep the sulphocarbolates down, either in solution or tablets, I gave him chlorine water. The fetid breath and tympanites now rapidly disappeared. Buttermilk was continued, and I found that it produces much less gas and foul stools than does ordinary milk.

The next day after the hemorrhage he passed large, black, tarry, foul stools. Gradually the temperature went down, and the patient became rational. By February 12, the temperature was normal continually

for three days. February 15, in the morning, he had a severe attack of vomiting, bringing up at intervals bile and mucus. The temperature went up to 105° F., pulse to 145 and became very weak. Ice was applied to head and over the heart. Strychnine and digitalis were given hypodermically every four hours.

By the next morning the condition was a little better, and then he gradually improved until by February 22 the temperature was again normal and pulse 100. After this the temperature stayed normal, and in a week's time the pulse was normal, the patient was feeling good and convalescence seemed established.

Then he developed an abscess on the left thigh but which gave him very little trouble. March 2, at 5 p. m., the nurse called me to come in a hurry. I found the nurse and two men trying, but only partly succeeding, in keeping the patient in bed. He was fighting and yelling like an Indian, and was in fact a perfect maniac. He received a hypodermic of morphine, which partly quieted him in about half an hour. His pulse was so rapid I could not count it—a running pulse. He gradually quieted, muttering all the while. At 9 p. m. he had another attack, more violent if possible, and he had more morphine because I did not know what else to do. He slept all night, was rational next morning, with a pulse of 125, and temperature of 102° F. In two days, pulse and temperature were normal, and from then uninterrupted recovery.

N. A. KAG.

Stockton, Ill.

[This case presents some peculiar features, and it is well-nigh impossible to make a diagnosis from the evidence submitted. However, I asked my friend, Dr. George F. Butler, to read the article and give an opinion. His comment follows:

"This is a very interesting case and a very difficult one to diagnose without having seen the patient and made careful examinations of blood, urine, etc. In some respects it reminds me very much of a case that I had in the Presbyterian Hospital some years ago. Some of the attending physicians of the hospital, notably Drs. James H. Etheridge,

Norman Bridge, and Dr. James B. Herrick, made diagnoses of endocarditis, of pyemia, and of acute articular rheumatism. I myself called the case typhoid fever, and still think this was correct.

"The hemorrhage described in Dr. Kag's case is the only symptom which would lead me to think that the case is typhoid. The pulse is too rapid and other symptoms are not typical. Neither are they typical of acute articular rheumatism. Unquestionably there was decided toxemia, more septicemic in character than otherwise. Is it not possible that the hemorrhage was due to an abscess in or near the bowels, from which the system was profoundly poisoned, giving the symptoms described, and subsiding when it discharged at the time of the hemorrhage?"

I am sure most of our readers will agree with Prof. Butler in regard to the decidedly septicemic character of the symptoms. What a pity that a sample of the blood was not examined in some good laboratory. For instance, if the case was typhoid fever there would have been no leukocytosis (which would have been marked if this were a pus infection) and the Widal reaction would probably have been positive. However, there is a fine opportunity for speculation. What say our readers?—ED.]

CHECKING UMBILICAL HEMORRHAGE

Apply a mixture of equal parts of starch and borax, dusting it on the bleeding navel, continuing until the hemorrhage ceases. This will form a cake. Let it remain a sufficient time. I have proved the good effect of the remedy on bleeding surfaces when stitches or plaster could not be used.

A. A. BARNETT.

Jerseyville, Ill.

TO ESTIMATE THE TOTAL SOLIDS IN URINE

A great many annoying diseased conditions are due to the fact that the person so afflicted does not pass a sufficient quantity of urinary solids, in other words, their excretion is below normal. An estimation of the total solids is very easy. Collect the

entire amount of urine passed in twenty-four hours, and multiply the quantity in ounces by the last two figures of the specific gravity, and then multiply this by 1.1. Example:

The amount of urine voided in twenty-four hours is 36 ounces; the specific gravity, 1.021. The formula then would be: 36 multiplied by 21, multiplied by 1.1, which gives 831. This latter number represents the number of grains of total solids excreted in twenty-four hours, and is about normal for a person of 100 pounds in weight. The foregoing formula was devised by Prof. Haines.

If one is more accustomed to the metric equivalents, he may use Haesers coefficient as follows: Multiply the last two figures of the specific gravity by 2.33. This will indicate the number of Grams of solids in every 1000 Cc. of urine. From this it can readily be estimated how many Grams are excreted in twenty-four hours.

From the result thus obtained one can judge very accurately of the relative activity of the kidneys.

The total solids normally range from 60 to 70 Grams, with a twenty-four-hour excretion of 1500 Cc. of urine, and the urea constitutes about one-half of the total solids, i. e., 30 to 35 Grams. The last two figures of the specific gravity represent approximately the percentage of urea. For example:

If the specific gravity is 10.18, the urea-percentage normally will be about one-eighth. If one bears this in mind it is many times of value. If we find the urea excreted is only 18 Grams, this would represent a total solid of 36 Grams. But upon figuring out the total solids, we find that there are 90 Grams, hence there must be some pathological constituent present to make up the difference, unless the patient be a highly nervous one and the excretion of urea is very low.

A urine analysis showing total solids of 1.40 Grams, a specific gravity of 1.030, and a urea-percentage of 1.2 would immediately make us think that the urea was very low, this leading to the conclusion that we either were dealing with a nervous patient, or else had some pathological

constituent, for instance sugar, was present. Hence, we should be very careful in our test for sugar or some other pathological excretory product.

Keep this item on your desk and refer to it. I assure you, you will find it of enormous value many, many times, and it will save you much worry as well as enlighten you on many apparently complicated cases.

J. FAVILL BIEHN.

Chicago, Ill.

THE INVESTIGATION OF THE COCA-COLA PEOPLE

What are the younger generations and the laity to think of the unfortunate errors made by the highest professional experts in medicine, and their shameful ignorance of the physiologic and therapeutic effects of such a common medicament as "caffeine"? Here we have men supposed to be of the highest authority, holding professorships in the largest schools and the authors of textbooks for medical students, swearing that their own works and teachings are wrong and misleading.

'Tis surpassing strange that medical experts subpoenaed to court are so egotistic as to make no preparation for the ordeal; flattering themselves that whatever their opinions are, they will be accepted as being "*ex cathedra*," wrong or right. Doesn't every doctor know that the lawyer never goes into a case, however trivial, until he has studied both sides of it? If not, then he would best keep out of the courthouse.

Can the laity be censured for employing "Christian scientists," "quacks" or "charlatans," after reading the sworn testimony of men sitting high in medical councils and possessing the full confidence of the profession in the Christian-scientist case?

Take Dr. R. C. Witthaus, a professor and teacher and author of a textbook on toxicology. In this work he says caffeine is very poisonous and instances thirteen cases of death from overdoses. Yet, on the witness stand he swears that caffeine is harmless, and when confronted with his own work, hedges by claiming he copied it from some unknown author.

Dr. Horatio C. Wood, occupying a similar position as professor and teacher, says in his works, "Caffeine is a muscular poison and very powerful" and, yet, as an expert for the Christian-science people, swears it is not a muscular poison. His book being brought in evidence, he also says he copied it.

Again, Dr. John Marshall, Professor of Toxicology and Chemistry, says caffeine is not regarded as a poison by the textbooks, and has to modify this as the evidence is brought forward, exclaiming, he is mistaken.

Dr. Stewart R. Roberts of Atlanta says he has examined 7000 children and that these examinations required fifteen to thirty minutes each. When the opposing counsel calculates that such examinations would have taken 233 days, he has to admit he was mistaken.

I could go on, but refrain; as 'tis, it is lamentable. No wonder Carnegie and others are for a greater length of study and research for our doctors. "There are more things in this world, Horatius, than ever dreamt of in our philosophy."

W. T. EDMUNDS.

Eutawville, S. C.

WHY I COME BACK TO THE FOLD

Do you notice that my name is again on your subscription list? I wonder if I can tell you why I quit and why I came back. It was largely because I was influenced. They said your journal was nothing but a booster for your drug house. They said you were a grafter, preying on the gullibility of your readers. They said you were not *en rapport* with the leaders of the medical profession. Oh, great Guns, I can't remember all they did say!

Moreover, I myself thought I noticed that many, many articles which were printed in your journal were useless to me. It seemed that many crossroads or back-street doctors wrote effusions which were examples of "those who rush in where," etc., etc. It seemed that many doctors would take up your space only to tell of something trivial or personal which did not in the least interest or benefit me.

And, again (pardon me), it seemed our editor was just a little too much of an optimist. He would be punctured by an idea embracing some new combination—then, hip hurrah, look out for the fire-works.

Also about this time I met with a great financial loss and I was blue and discouraged. The world didn't look good. The practice of medicine was a fake. The different pathies were getting the cream of the business, and all that. About that time an osteopath (since departed) came to our town. To make a long story short: I was out of harmony with the things the journal taught.

Well, about that time I had an opportunity to sell out in my old town and pay off my debts, which I did, and I came over here.

This place is in the midst of a large irrigating proposition. It is on the boom, and, strangely enough, there are a great many doctors here who have taken up land and are now making homes on our farms. They have quit practising and are going to spend the rest of their lives on a farm. None of them have any money. All of them are disgusted with the practice of medicine. I have never spent five minutes talking medicine with any one of them but what they made some nihilistic statement in regard to therapeutics like these:

"There is ten times as much harm done by drugs as good."

"An intelligent doctor will practise with not more than ten drugs."

"Most diseases are self-limited diseases, and a man is a fool to use anything but the expectant treatment."

Right here please take a five-minutes' intermission while I "cuss."

Now, these poor, down-and-out, discouraged fellows are the results of our present-day medical schools, and our "leading thinkers" (?), and our God-help-us surgeons. Understand, I am not including among these surgeons some of our really great men who do realize and maintain that there is much to be done with drugs. It does apply to our "county-seat" and half-educated surgeons in cities, those who make such talks against any therapeutic

procedure other than surgery, either from untarnished ignorance or in the hopes that it will bring them a trifle more business.

Don't you see why I re-subscribed? I need something to offset this pessimistic, nihilistic bunch I am up against. And now listen: I can get it from you.

I have got to that period in life where, in my own mind, therapeutics is not a "guess"—I *know*. This may be conceit. But whenever I write a prescription I know what it is going to do. I realize that this mental condition of mine may be all wrong, and that it may be only the result of ignorance; but, really, isn't it a pleasant sort of ignorance? You may not believe in religion as my old mother does, yet, if you had her hopes, aye, assurance, of a future life, it would give you unbounded satisfaction. So it is with my therapeutics.

I have spent a great deal of time and money on postgraduate work, which, by the way, I regretfully admit was largely wasted. But, better, I have been a great student of therapeutics. That particular branch of medicine has always interested me.

When I first came out of school I would use for a cathartic or laxative just about whatever drug of this sort that came into my mind. Now I believe I know the specific indication which calls for a certain drug. I do not use aloes where I should use podophyllin. I differentiate between, say, sulphate of magnesium and cascara, or phosphate of sodium and senna. The same with the antipyretics. What a field for study there is in the different physiologic action of aconitine, veratrine, acetanilid, and the like. So, also, in the domain of the hypnotics, intestinal antiseptics, the tonic drugs, and so along the list. Then, again, those remedies which act more subtly on the intricate physiologic processes, many of which are indicated only by some evasive symptom of a pathologic nature. Yet, what an interesting problem it is to hunt them out and apply the remedy.

In the few years which I really have been studying medicine, I can see so much more when I look at a sick individual than I did before—little differences in the appearance

and feeling of the skin, pulse, tongue, eyes, abdominal organs, etc.; differences in the action of the heart, lungs, nervous system. What a beautiful problem I have, to decide just what therapeutic measure to use in each particular case.

Yes, I nearly quit the practice of medicine once, but since I have taken up this line of study it is really almost fun to practise medicine.

Have I said anything in this that suggests to you that I want you to think that my cases all get well and that I never have any troubles? I am sure that I do not mean to convey that impression. Some of my patients *do* die, and some do *not* get well nearly as quickly as I wish. Some quit me and go to the other doctors. Altogether, I suppose I have the usual amount of disagreeable things in life. But down deep in the bottom of my heart I know that I am working hard and studying, and I am gratefully thankful for the faith that is in me, and best of all, I am enjoying my work.

Query: Am I really growing or is this merely a mental condition?

F. A. LONG.

Valier, Mont.

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[Welcome back, Doctor. We're glad to have you with us again. A few of our old-time friends have, for one reason or another, stopped taking CLINICAL MEDICINE *for a time*, but most of them find that they cannot get along without it after all.

Some may be influenced by the critics—but did you ever stop to think that it's only the man or institution that has "guts" that has any critics? We are glad that we have ours—it shows that there is LIFE in this institution.

As to the articles from the "crossroads," we are glad to get them. CLINICAL MEDICINE represents all of the profession, not merely a part of it. The city men have no monopoly on the good ideas, though some of them haven't "tumbled" to that fact yet, and wouldn't know a real idea unless it was on a glass slide (German), and labeled. And optimists? Sure we are. But doesn't the world need them—need us, perhaps? If by our efforts we have put

new faith, new strength, new love for our profession into the hearts of some thousands of doctors, we can bear with equanimity the criticisms of the few who read our journal and study our work only for the sake of finding fault with us. We are repaid many times over for all this by the support of men like Dr. Long.—Ed.]

SACCHARATED LIME WATER FOR THE REMOVAL OF WARTS

An article in the February CLINIC, on the use of lime water internally to eradicate warts, brings to my mind the preparation known as saccharated or concentrated lime water, which, perhaps, may not be known to some of the readers. Its mode of preparation is as follows:

Quicklime 1 part
White sugar 10 parts
Water enough to make . . . 32 parts

Slack the lime until it crumbles to a dry powder, then rub it up with the sugar. Add the water, and stir until the hard stiff mass formed by the sugar is dissolved. Allow to stand for several days, then filter. The average dose is 30 drops in any vehicle.

GEO. D. STANTON.

Stonington, Conn.

THERAPEUTIC NIHILISM

He who believes that there is no virtue in medicine would better lay down his directorship of the sick.

It is quite true that there are but few specifics, so called, but we have many medicines which can steer the frail bark of humanity to more open waters, where can be gathered the life-giving elements to aid us in attaining strength.

We can never expect to have a specific for all ailments, especially when we take into consideration the various complications arising in a body constantly undergoing chemical changes and producing in itself many poisons besides those taken from without. The steam-engine has its waste products—ashes, smoke, and an excess of steam and waste water. It becomes corrugated, and the rust becomes so caked as to impair its usefulness, and so at times

the corrosive products accumulate so as not only seriously to impair the machine, but to render it useless. At these times we need the aid of the mechanic to oil, polish, clean, and repair the engine.

We can readily see the analogy between the machine and the human engine. Is it not necessary that at times all the things named must be done to our body? Does it not need to be lubricated, cleaned of all waste, and put in "shipshape"? Have we not constantly to watch to see that the alkalinity does not predominate or overbalance the acidity of the blood, and the reverse; that too much nitrogenous food be not taken; that useless waste may not have to be eliminated; or that too much fat or starchy matter may not exceed the requisite need or give the liver too much to do? As with the engine, we must have safety valves. Therefore it becomes essential that certain medicines be administered to neutralize an overalkaline or acid condition, and, hence, we have great use for the acids or the alkalis. If we find a surcharged system, full of debris or of waste products, must we not clear out the ashes and give the body a chance to do its duty by opening the safety valves—the bowels, kidneys and skin?

All this we do, not by specifics, but by those well-known remedies which aid us in throwing off waste and toxins, and, hence, we use those eliminants which act upon the vital and other organs.

Who can say that this procedure is not rational, logical, scientific? Who can deny the virtues of castor oil, epsom salt, aconite, belladonna, the sodas, potashes, irons, and the many other remedies, all tried and true? Those who have tried to accomplish good effects know full well that we have many remedies that will produce results, and that we could not do without our purgatives, diuretics, diaphoretics, absorbents, rubifacients, and many others. We know well the necessity of sustaining a weak heart, of stimulating a lowered vitality.

Only those who study therapeutics and have seen results due to their administration can have confidence in the practice of medicine. If we have a case of pharyn-

gitis or laryngitis, we know to a certainty that belladonna, aconite, external and internal applications, will restore the parts to a normal condition, and we are well advised of the good effects of the so-called specifics. Let us take a few examples, as space will not permit our dwelling upon the subject too extensively.

It is, of course, well known that our bodies are affected with many ills, so that we can give only a few cases showing the need for medicines. Now, what do we actually know? If the system is affected with parasites, external or internal, such as scabies, tapeworm, the roundworm or other parasites, we know that sulphur, oil of male fern, calomel, santolin, etc., will destroy or expel them. If the bladder or kidneys are irritated, we know that belladonna, hyoscyamus, lupulin, cantharides will all be of use, according to indications. Is the liver congested or torpid, we use effectively euonymin, leptandrin, ipecac, calomel, podophyllin, succinate of sodium, and many other well-known remedies.

If we have to deal with some affection of the bowels, such as dysentery, diarrhea or some other inflammation, we have at our command many valuable remedies, such as calomel, soda, bismuth, ipecac, opium, acetate of lead, nitrate of silver, each one to be used according to indications and the necessity of the case.

If the eye is diseased, we generally can give relief to all external manifestations, and have at our calling atropine, eserine, calomel, yellow oxide of mercury, the potashes, and can be sure of relief being obtained in many cases by internal and external medication.

Besides all this, are we to ignore serum-therapy, external applications, massage, electricity, and many new medicines coming daily to the front? Indeed, so many ills of the flesh can be actually cured that it were folly to try to mention the numerous appliances and medicines with which an able physician is armed.

Of course, there are yet many diseases which cannot as yet be cured; but he who says there is no virtue, or but little, in the practice of medicine ought to abandon it and go to the field and plow, for the medical

profession has need of Doctors of Medicine, not of nihilists, of men who can relieve the sick and aid them to be well again.

J. G. B. BULLOCH.

Washington, D. C.

THE USE OF BARLEY

Up to the present time one of our most valuable cereal grains, barley, has been employed almost exclusively in the manufacture of beer. It is with pleasure that we note that an effort is being made to introduce barley in a less objectionable form as a food. Barley flour is said to contain more nutriment than any other cereal. As pearl barley it has been employed like corn starch, sago and arrow-root as a dessert. A firm is now putting up pure barley flour in such a shape that it may be used by infants, invalids and nursing mothers as a food. It is a good idea and ought to win support from the profession.

THE TRUTH ABOUT OSTEOPATHY

In the well-written article, in *THE CLINIC*, by Dr. Robinson, entitled "Scientific Medicine Versus Quackery," I find that he, in common with other doctors, has wrong ideas and thereby draws wrong conclusions as to osteopathy. For that reason I desire to state herein a few facts which any of my professional brethren can soon verify by investigating a legitimate osteopathic college.

First, as to our education. The osteopathic course is now a three- or four-year course. The three-year course consists of nine months per year. A fourth year has now been added. This gives the osteopathic-college course a longer term in actual college attendance than the average medical college, since the medical year has a longer vacation than the osteopathic year.

Students in osteopathic colleges study the same books used in the best medical colleges. The course, as regards books not relating to osteopathy in diagnosis or practice is identical with those studied in medical colleges in the following subjects: anatomy, bacteriology, chemistry, diag-

nosis, embryology, gynecology, histology, medical jurisprudence, obstetrics, physiology, pathology, diseases of eye, ear, nose and throat, skin diseases, mental diseases, nervous diseases, pediatrics, venereal diseases, surgery, both major and minor, orthopedic surgery, ambulance work, dietetics, hygiene, symptomatology, public health, toxicology, and so forth. In other words, the osteopath is taught the same subjects from the same books used by the medical profession in its colleges. The only difference is that the osteopathic colleges teach less medicine. The materia medica of osteopathy is largely that of antiseptics, antidotes, and anesthetics, although a general idea of the action of the drugs is taught.

To the foregoing is added a more minute and thorough study of the anatomical and physiological structures of the body than is taught in a medical college, because osteopaths find many chronic nerve irritations due to hyperemic conditions around nerve-centers, caused by slight anatomical slips due to accidents or sprains and which a purely "medical" doctor never looks for, for the reason that he has never been taught to do this.

Further, there is taught practice, or therapeutic methods. Also, all osteopathic colleges require dissection the same as in a medical college, besides hospital interne work in surgical as well as in the various nonsurgical cases.

Now, why will the average doctor of medicine call us quacks and uneducated, when we have assimilated the same knowledge he has from the identical books? Our education is identical with the medical education up to the point of therapeutics. We learn most of the medical therapeutics and then add to this our special method of treatment, with an additional method of diagnosis unknown to the purely medical doctor. We do not believe all diseases are due to bone lesions. We believe in other causes also. All the known instruments of diagnosis used in medical practice are used by the osteopath.

So much for our education. If we are quacks, then all of my medical brothers are too, since they have no knowledge of

body in health and disease that we do not make use of in our colleges.

Now as to our methods of practice. First of all, please, my medical friends, get that iron-bound idea out of your heads that osteopathy uses rubbing or massage. *There is no rubbing and no massage in osteopathy.* The direct application of the hands may be roughly classed as twofold: One part of our work is some anatomical movement (similar to a surgical rotation of some part), to produce a normal condition in some organ or structure by relieving the vascular or tissue pressure on some nerve-center, nerve-trunk, or vascular structure, which abnormal pressure or swelling has been due to some accident or sprain or sequel of other diseases, thus changing the normal relation of structures by some skeletal slip or muscular contracture. It is not a rub. It is usually a pull or stretch applied as one does a movement in the surgical treatment of dislocation.

The second portion of our treatment is stimulation or depression of a vasomotor nerve-center, to cause a local or general change in the vasomotor conditions. We do this by physiological stimulation or depression of the spinal vasomotor centers. It is not rubbing.

As the medical doctor often gets effects through these same vasomotor centers by application of heat, cold, electricity, counter-irritation, etc., why deny that we can thereby influence vascular conditions also? The osteopath also uses as adjuncts, heat, cold, etc., in his practice.

It is profound ignorance of our methods to think we treat appendicular abscess and other conditions, like gonorrhea, etc., by any manipulation of the diseased area. We use surgery and antiseptics in such cases. We rarely treat the diseased organ direct, but cure through the appropriate nerve center or vascular controlling center, or by eliminating all the poison of germs and body waste through the stimulation of the organs that throw out such waste, as the kidneys, the bowels, etc. Surgical methods in surgical cases and our methods are based on all known knowledge of disease, which means the sum total of all knowledge dug out by doctors of all schools. If we are

uneducated, then so are all doctors of all schools.

L. V. READ.

Spring Valley, Minn.

THERAPEUTIC SUGGESTIONS

I have read with pleasure the scholarly and comprehensive articles by Dr. Robinson on "Scientific Medicine Vs. Quackery" as appearing each month in *CLINICAL MEDICINE*, but deplore the position he assumes on the question of psychic healing.

His treatment of the subject shows a very decided lack of knowledge or even cursory observation in reference thereto, for the psychic treatment of disease is almost as well recognized among the laity as other systems, and even its philosophy is better understood by its more intelligent practitioners and patients than the rank and file of the medical profession know of the action of their drugs.

The psychic treatment of neurotic diseases, more particularly functional, is becoming more and more widely practised in proportion as it is better understood. In Germany, where men give most time to study and experiment, it is extensively used among physicians, as well as upon the Continent by physicians and scientific men. To say that it is and always has been the property of medical men, recognized and used, is only half the truth, for it has never until within the last twenty-five years or so been systematically or intelligently recognized or employed, as therapeutic suggestion is but of very recent application. It forms the true essence of all forms of mental healing, such as Christian science, divine science, spiritual science, magnetic healing, etc. When physicians understand this better they will be able more intelligently to extract from all these things the true therapeutic essence, and use it accordingly, in place of attempting to ridicule such a valuable therapeutic aid out of its proper place and use. In this way can these fallacies be made to give place to the real and true, and these cults and systems of exploitation be forced into oblivion.

The study and practice of psychic treatment is not only interesting but one of the

greatest aids in the cure of the sick, but it is just as Jesus says in his philosophy: "If any man will know the doctrine he will know if it be true or if I speak of myself."

I have been a close student and practitioner of psychic treatment for selected cases for over twelve years and I would not be without its aid at any price, and applied intelligently and in suitable cases it will never fail of the desired result. To laugh, sneer and ridicule, or attempt to dismiss the matter contemptuously as unworthy of scientific thought is to betray a want of information inexcusable in the face of what has actually been done and is being done by Christian science and such organized cults in the cure of nervous and functional diseases.

Better to learn what the principle is (suggestion pure and simple) and teach the people, and apply it ourselves as a therapeutic adjunct to our medical or physio-medical treatment, and we shall cease to be looked upon as we are today, with less and less favor, as opposing truth and progress, and trying to impose medical bondage upon the people. From personal knowledge I know how incompetent any person is to speak about psychic treatment or suggestion who has not given the subject close study and experimented. This might be said of many other subjects of human interest, but I think it is particularly so regarding psychic investigation and study, for it borders closely upon the confines of the soul.

The role of suggestion is in the realm of functional and nervous diseases or those just bordering upon the transition from functional to organic. Here, by judicious mental and physical suggestion, we turn back the current and cause it to flow into the normal life stream of nutrition. I want to illustrate in closing a few cases from my own practice.

CASE 1. A young woman 26 years old came to me with a story of an accidental falling upon the horns of a cow. The cow was just as much frightened as she, and between the two she managed to get free without serious physical injury, but night after night, for two years, she retired to dream over the occurrence in all its fright-

ful vividness until she loathed sleep under such conditions. It began to prey upon her general health and she lost appetite, flesh, strength, ambition, and the desire of life. Several physicians treated her along various lines, but in such cases drugs only aggravate. She was becoming hopeless, and entertained visions of insanity, when she was directed to me. One month of simple direct suggestion removed every unpleasant symptom, restored her health and strength, and she still remains perfectly well, though it is now two years since she began treatment.

CASE 2. Young married woman of 30, with a neurotic family history; tormented by phobias. Whenever she sleeps she is constantly awakened by fear of death—something always dreadful about to happen. She has lost health and strength, developed constipation, indigestion, anemia, and general loss of nutrition. One month of suggestion changed the whole complexion of things and restored her to mental and physical health and happiness.

CASE 3. Young woman of 27, with neurotic family history. Nervous sick-headache since childhood, attacks occurring every two weeks followed by great weakness and prostration. Sleepless, dyspeptic, emaciated, constipated and general very low physical condition. She had been treated by physicians of different schools for years, including osteopathy, etc., with but little relief. It required three months of careful persistent suggestion to restore her to health, but she is now enjoying life in every way. At first she could not walk a block, now she is taking care of a house and family, doing all the work without undue fatigue.

CASE 4. Young man of 20, with good family history. Has been a secret masturbator since early childhood. Later it began to prey upon his mind and he became morose, a recluse and refused to see anyone. Developed melancholy and intimated suicide. Was taken to various physicians and specialists and changes of climate were advised. He became wasted to a shadow, and anemic, constipated and dyspeptic. Owing to his slowness to exert himself or take to treatment it was nearly a year

before he was restored to normal health and strength.

CASE 5. Young woman of 22. Hysteria. After treating her from August 20 to November 10 by remedies, homeopathically, eclectically and with alkalometry, and empirically, without effect, she was failing constantly and the family becoming discouraged, I advised suggestion. One month of daily suggestion restored the normal balance and three months later she weighed twenty pounds more than at any time in her life.

None of these cases were treated medicinally during the time they were taking psychic treatment and all were treated by simple directed suggestion. I do not use hypnotism, as I am convinced better results may be obtained without it; besides, its application is too limited, there being so few who are suggestible to hypnosis. I strive to strengthen the will, induce confidence and encourage the patient to look upon life optimistically. To this I add breathing exercises and the right use of water and food, which may or may not be deemed important. Some practitioners disregard them entirely.

These are just five cases from everyday practice, illustrating the roll of psychic treatment and showing the futility of material remedies. They all betray the neurotic condition and readily yield to psychic treatment, and to no other. I could multiply these manifold and recite cures by this method which, if I were to tabulate them here, would not be believed except by those who had like experiences.

For the honor and glory of our profession, I contend that every physician, particularly the younger members of our chosen profession, should give this treatment serious study and practical application. By so doing, we can show up Christian science particularly, when we hold the key to their overrated and delusive system of self-deception, and by educating the people to the fact that the one and only essence and good in it is suggestion pure and simple, with right thinking and living. When this is done, Christian science will fall to pieces, as will other organizations which exploit

uninformed, credulous people, and put them into mental bondage.

F. W. SOUTHWORTH.

Tacoma, Wash.

[We have received a number of papers from men who disagree with Dr. Robinson on one or more points. This is one of them. In the July issue the others will be published. It has always been the policy of CLINICAL MEDICINE to print the "other side." The discussion of the problem of "quackery" promises to be extremely interesting. In the July issue there will also be another paper by Dr. Robinson, and papers by Dr. Egbert of Washington, and others, on the same topic.—Ed.]

SUGGESTIONS ABOUT TAKING MINERAL ACIDS

One great objection to taking hydrochloric or any of the other mineral acids is the corrosive action on the teeth, even when freely diluted and if cautiously sucked through a tube. This always has been my own dread, for no matter how quickly and freely I rinsed my mouth after a draught, my teeth would always feel "on edge." Lately I have finally solved the problem, and the wonder is that the method was not suggested or thought of before—as far as I am aware—it is so simple and logical.

Prepare a weak solution of sodium bicarbonate, to which add an equal quantity of salt—the latter for the taste. I have not determined any ratio, but used probably ten or twenty grains to the ounce. The patient may be instructed how to prepare this at home, to save prescription prices.

Now just before taking the acid dose, take half a teaspoonful of the alkaline solution in the mouth and rinse it thoroughly through the teeth, then spew it out. Have ready the diluted acid. (I find ten drops of pure hydrochloric acid in one and one-half ounces of water satisfactory), carry the glass tube clear back to the uvula, quickly suck and swallow the liquid (avoiding its spreading in the mouth), and quickly wash the buccal cavity with several mouthfuls of water, swallowing the latter. Then

just as rapidly take one-half to one dram of the soda solution and sharply rinse the teeth, being careful not to swallow any of it, but spit it out. The doing is easier than the telling. In this way one need not load up with water soon after a full meal, which often is objectionable.

ADOLF G. VOGELER.

Chicago, Ill.

THE DIGEST OF POSITIVE THERAPEUTICS

Being desirous of completing our files of the old issues of *A Digest of Positive Therapeutics* published from time to time by Dr. W. C. Abbott, some of which are entirely out of print, we wish to ask those of our readers who may have preserved their old copies to donate such as they care to spare us for our library.

We possess copies of *The Digest* issued in 1901, 1906, 1908, 1909, 1910.

Any older ones or any issued in years not here mentioned we should be very happy to receive, and should be pleased to reciprocate. We should also be glad to receive one or two duplicates of the issues for 1904, 1906, 1908.

If you have any of the copies desired that you can spare and are willing to send them, please direct them to the Librarian, Dr. Achard, in care of the Journal.

PARASITIC SKIN DISEASES, IODINE, IODINE PETROGEN, AND A CORRECTIVE

In your criticism of my treatment of parasitic skin diseases (April CLINICAL MEDICINE, page 432) I note that you have misquoted me, undoubtedly through mistake or poor handwriting. The line to which I refer reads "without the necessity of draining the pus out." What I intended to state was "without the necessity of withdrawing the hairs."

I think that many of your readers will recognize iodine petrogen and that many use it, no doubt. It is a preparation of Wyeth's, of Philadelphia.

You are right about the reaction—it does occur; but even a child will not react too

strongly or object to the treatment. Even favus responds well to the treatment. Would you rather, personally, have nearly all your hair pulled out or would you not rather stand a little reaction from the treatment?

Tincture of iodine being nonpenetrating, will not give the results. Iodine petrogen penetrates deeply, which is needed in the scalp to get into the hair, follicles from top to bottom.

GEORGE W. POTTS.

Asbury Park, N. J.

[The error was due to a "mistranslation" of the doctor's penmanship. Please be careful, every one of you, to write so that we can make out what you have to say. We find this pretty hard sometimes. We are glad to give the information concerning petrogen, which has come to us, since the article was published, from a variety of sources.—ED.]

SUCCESSFUL EXPERIENCE WITH NUCLEIN

I have had some wonderful success with nuclein hypodermically and I will give a brief report of two cases in which it was used.

Mrs. K., age 54, bronchopneumonia. I saw her after being ill a week; pneumococci, pus, mucus, etc., and occasionally blood was found in the sputum. Fever went up regularly every afternoon to 101° or 102° F., but went down at night; fever was preceded by slight chill. It continued in spite of all treatment, with consultation, for four weeks. The consultant expected gangrene.

We gave nuclein by mouth, creosotal, etc., with the usual tonics and febrifuges. Then instructed the nurse to give hypodermically 20 drops of nuclein solution an hour before rise of temperature. The nurse said the patient coughed for twelve hours, expectorating freely; there was no temperature from that time on. Kept this up for a week, then dropped to 10 drops for a short time, complete recovery following.

Boy, 4 years old, in about the same condition as the foregoing. Five drops of

nuclein solution was injected hypodermically twice a day. This abated the fever. This case had run on with low temperature after bronchopneumonia for three weeks.

H. L. WATROUS.

Eastman, Wis.

[Again we say, as we have said many times before, that nuclein is not used nearly as often as it should be, and the variety of conditions in which it proves of value is much greater than most of us imagine.—ED.]

ARSENIC SULPHIDE, AND CHROMIUM SULPHATE

The doctor in general practice will find in arsenic sulphide a remedy that is more desirable than "606" and it can be used without the serious dangers attending the administration of this new chemical. There is some reason to believe that when arsenic sulphide is administered in the same dosage it may do everything that is possible for "606" to do and at much less cost.

In one case of renal insufficiency I tried, for several months, to bring about improvement, using for this purpose benzoic acid, benzoate of ammonium, nitric acid, lemons, and oranges, but failed. I found the specific gravity of the urine 1010, and even less, phosphatic, and with elimination way below normal. I could not advance above the 1010 notch. In the clinical aspect of the case there was a remarkable improvement, but the faulty elimination, that "1010", was unsatisfactory in a man weighing 180 pounds. Sexual neurasthenia, according to my judgment, is a name pure and simple; it is no basic condition, and, therefore, when again receiving this patient, I found the specific gravity of his urine 1010, blood pressure 110 mm. of mercury, I knew that tonics would not cure here, as they had failed before.

I now gave chromium sulphate, two tablets after each meal, or six daily, and used, in addition, cactin, triple arsenates and phosphorus as the toners. This treatment, in one week, gave us a specific gravity of the urine of 1018, with a daily elimination of 1267 grains, or sufficient. The report of this

case is rather premature, but I have some reasons to believe that the results from chromium sulphate are unlike all else that I have heretofore used. The words "clean up, clean out, keep clean" are peculiarly adapted to the remedy in question, and if not, then why not? If we look at a disease broadly, we must favor the idea that all diseases are caused by filth somewhere in the body. To remedy the basic condition is the only cure that remains permanent.

A. W. RINGER.

Cincinnati, O.

PHOSPHORUS POISONING.—PNEUMONIA

Since you were rash enough to ask me to come again I am back with an experience which will perhaps be interesting and from which I hope to get some help.

I was called, last week, at nine o'clock to Gracie Q. Father told me she had been vomiting the day before and seemed very sick now. I found a child of 2 1-2 years, unconscious, head slightly retracted, eyes rolled up so the pupils were hardly visible, jaws set, abdomen much swollen and tympanitic, with the rectus muscles hard and board-like, in fact all the muscles rigid. Temperature normal, pulse weak and rapid. At first I thought it some ordinary digestive trouble, but the mother called my attention to the yellowness of the skin and showed me a napkin stained with deep-yellow urine. Never having seen the child before, I should not have noticed the yellow skin, as the tint was not deep; but the mother said it was abnormal. The lower part of the sclerotic coat was deeply tinged also.

After making inquiries as to what she had taken and receiving the usual answer of "nothing," the mother at last remembered the child had been seen by a friend in the house three days before with four or five matches, the heads of which were sucked off; also had been found with one in her mouth the next day. I at once felt we had a key to the trouble, but it was too late to save her.

I did what could be done with hypodermics of antispasmodics, using atropine and morphine, also heart tonics. At first I put

her feet in hot mustard water and applied heat to the abdomen. The spasm relaxed about 3 p. m. and she roused and spoke; she swallowed a little water, but not enough medicine could be given by mouth to do any good; the heart failed and she died at 4 p. m.

Of course I consulted my authorities on phosphorus poisoning and found the only feasible antidotes mentioned were milk of magnesia, lime water, or, doubtfully, potassium permanganate. Old French oil of turpentine is recommended and condemned in the same book, but as it can not be had, it made no difference. Copper sulphate also doubtful. Though I knew it was too late for antidotes, I tried to give the lime water and milk of magnesia, but it was not swallowed. The body the next morning was thoroughly jaundiced, although the tint was only slight at death.

Now the questions I want to ask are these: If called at once, could the child have been saved? Have any of the "family" had experience with such a case? Why did the poison act so slowly? The mother did not realize the poisonous nature of matches, and though the child was sleepy and vomited for two or three days off and on, she thought it a digestive trouble that would pass. She did not seem dangerously ill till a short time before I was called.

I also wish to speak briefly of a case I have just dismissed. Man of fifty, drinks at home, but not a drunkard. Had all the signs of beginning pneumonia with pleurisy in left lung when first seen, sputum a little rusty and thick, cough very tight and racking. The next morning an increase of fever, which was only 100° F. when first seen, and severe pain in right pleura. I do not say it was pneumonia, as I did not catch a "coccus" and identify it, but it looked that way.

I put him on dosimetric trinity, pilocarpine and bryonia, one of each to a dose, in a tumblerful of water, every half hour for two hours, increasing the interval according to sweating and temperature (temperature 102° F. first evening and 101.6° F. the second evening); also asclepidin every two hours. For the cough a solution of ammonium iodide, 15 grains to

the dram in syrup. Try this in your tight bronchial coughs.

By the third day his symptoms were all better. Cough loose, pain gone, temperature 99° F. He had injured his eye just before going to bed, and as it did not improve, I called in a specialist, as I thought the slight rise of temperature remaining was caused by the eye; and it soon cleared up as the eye improved. Today, the eighth, he is up. The eye alone prevented his getting out before.

While we know pneumonia is self-limited, I should not have dared to wait for nature to cure this case. It is not the first where dosimetric trinity and pilocarpine have served me well. The pulse was weak, hence dosimetric trinity instead of veratrine. I also used antiphlogistine.

OLIVE W. BROWN.

Salem, Mass.

[The picture the doctor presents in that first case is an excellent one of phosphorus poisoning, and that it undoubtedly was. After a poisonous dose of phosphorus the first symptoms usually appear within a few hours, consisting of pain and discomfort in the stomach, with garlic-like eructations and finally vomiting, the substance ejected being phosphorescent in the dark. There may be diarrhea, though not always. These early symptoms often disappear quickly, and may be overlooked, as they doubtless were in Dr. Brown's case. After a few days the secondary symptoms occur. There is nausea, vomiting, tympanites, some jaundice, weakness, rapid pulse, various hemorrhages, and finally collapse and coma. The pathologic characteristic of phosphorus poisoning is the fatty infiltration of vital organs.

If the patient is seen early he can usually be saved. Copper sulphate is usually given, first as an emetic, and second because it is supposed to be antidotal to the poison. Above all it is important to withhold fats and oils, which facilitate the absorption of the poison. The remedies recommended by Dr. Brown are those usually advised, and used early, with complete emptying of the alimentary canal, are usually effective. If used late, they are of little, if any, value.

The doctor's treatment of that pneumonia case was excellent. I should, however, like to emphasize one thing—the importance of cleaning out and keeping clean the bowel in these cases. Some of the "family" forget this, and then wonder why their defervescents fail to "work."—Ed.]

RED-CROSS PRIZES

The American Red Cross announces, in connection with the International Conference of the Red Cross which will be held at Washington, D. C., in May, 1912, that the Marie Feodorovna prizes will be awarded.

These prizes, as may be remembered, represent the interest on a fund of 100,000 rubles, which the Dowager Empress of Russia established some ten years ago for the purpose of diminishing the sufferings of the sick and wounded in war. Prizes are awarded at intervals of five years, and this is the second occasion of this character. These prizes in 1912 will be as follows:

One of 5000 rubles.

Two of 3000 rubles each.

Six of 1000 rubles each.

The subjects decided upon for the competition are:

1. Organization of evacuation methods for wounded on the battle field, involving as much economy as possible in bearers.
2. Surgeon's portable lavatories for war.
3. Methods of applying dressings to aid stations and in ambulances.
4. Wheeled stretchers.
5. Support for a stretcher on the back of a mule.
6. Easily portable folding stretcher.
7. Transport of wounded between men of war and hospital vessels, and the coast.
8. The best method of heating railroad cars by a system independent of steam from the locomotive.
9. The best model of a portable Roentgen-ray apparatus, permitting utilization of x-rays on the battle field and at the first-aid stations.

It rests with the jury of award how the prizes will be allotted in respect to the various subjects. This is to say, the largest prize will be awarded for the best solution

of any question irrespective of what the question may be.

Further information may be obtained by addressing the Chairman, Exhibit Committee, American Red Cross, Washington, D. C.

COMMENTS ON A THERAPEUTIC NIHILIST

In *The New York Medical Times* for March I read an article, under the heading of "Therapy," by Dr. Elmer Lee, A. M., M. D., Ph. G. It aroused me very much in reading it to find so many suggestions of what ought to be done and how he claims that six remedies are sufficient to treat all diseases encountered in a general practice. Also his remarks about fevers. Also his doubts as to whether the future discoveries of chemicals will be any better than those of the present day. Also his doubts and pessimistic views about many other things in medicine.

That is the great trouble with many of our writers of today. They are always ready to suggest, but not to instruct, or, in other words, tell us what to do. Dr. Lee claims that medicine is a science, but it could hardly become a science if all doctors were to have such pessimistic views about the future of medicine as he has taken, saying you must depend upon the patient's vitality to pull him through, and that fever needs no special treatment.

All this is true in a few instances only, as in mild cases of fever. But in all cases where the temperature comes near the danger-mark, the treatment for its reduction is absolutely necessary, be it by drugs or hydrotherapeutic measures. For we all know that if acute fevers are properly reduced below the danger-point, the patient will recover much more rapidly, and, in many cases, what would turn out to be a severe sickness is thereby aborted.

If Dr. Lee could name the half dozen drugs he speaks of as sufficient to treat all diseases met in general practice, he will do the medical profession a great favor, indeed. I have practised medicine for twenty-five years and I never did nor ever could get along with one-half dozen of drugs.

In fact if, as Dr. Lee says, the practice of medicine is a science, it would prove the doctor a poor therapeutic scientist who knew of only six remedies to treat his patients with.

If medicine is to be a scientific profession, the doctor of medicine of today must know more about his drugs than a paltry half dozen. Yes, he must know at least one hundred or more. He must scientifically study their exact dosage, their physiologic effect, the therapeutic effect, toxic effect, and the antidote. Then he will truly become a scientific physician. I know at least two hundred drugs, as I have made a special study of therapeutics all my life. I know whereof I speak, and that I make use of all of them more or less in the course of my daily practice, goes without saying. Surely, a therapist of limited knowledge as to the action of drugs is not and never will be a scientific physician.

A scientific doctor is a man whose knowledge is of wide range, and when he gets into a tight place where wits count, he can utilize his knowledge to its full advantage. And right here I will say that the man of today and of hereafter will have to hustle and get himself familiar with modern therapy, especially the active principles—the alkaloids—which will, in the near future, become the arms of precision of the scientific doctor. For the alkaloids are scientific drugs in themselves, and as scientific drugs are forging to the front, just so must the scientific doctor grasp the material which is the foundation of success for the scientific professional man; for by treating your patient with the scientific drugs—the alkaloids—you can give them just what they require. These can be given in small, often repeated doses until you get the effect desired, reducing the dose as necessary to maintain that effect for as long a period as you may desire.

If the physician knows his drugs well, he will have little trouble in mastering disease, providing the doctor has been consulted at the proper time and the patient has not an incurable affection. Many patients that succumb in sickness do so by not getting the proper medicine or in not calling the physician at the proper time.

How many cases of croup and diphtheria could be saved if the physician had been called in time so as to get his medicine to work! But, unfortunately, a great many people wait until it is too late to do anything for them.

Indeed, the practice of medicine today has become a science, and therefore it behooves the medical profession to wake up and do more investigating along the lines of dosage and action of drugs, especially the active principles, that they may know when and how to apply the proper remedy to get the best results in curing and overcoming disease, and thereby carrying your patients on to the road of health.

How much better would it not be if medical writers would not only make suggestions about what ought to be done, but how to do it. Dr. Lee says, we want facts. Yes, facts are what we want. Men who will give us practical ideas, the real facts, how to do things from their own personal experience. And here is where the interchange of practical facts given one to the other through the medical journals will do more to make practical doctors than anything else. Yes, then medicine will become a science when the physician becomes positive as to the action of his drugs and can say, I know when and how to give to get the best therapeutic results. When this is accomplished, then only can we become scientific therapists and true physicians.

W. F. RADUE.

Union Hill, N. J.

ATROPINE IN UTERINE HEMORRHAGE

Here is a brief report of a hurry-up call three miles out in the country, involving the successful combating of severe uterine hemorrhage with atropine.

The patient (multipara, age 43, weight 165 pounds, brunette) was taken with uterine hemorrhage while alone at home. She had walked a quarter of a mile to get a neighbor to telephone for me, and then walked back, virtually leaving a trail of blood all the way.

When I arrived I found her still alone, lying across the bed, with feet elevated,

pallid, pulseless, and blood everywhere. Do something? Well, I guess so! Hypodermatic injections of atropine, 1-120 grain, and of strychnine, 1-60 grain, and, in five minutes, again the atropine. The hemorrhage lessened after the first injection, and ceased completely after the last.

I then gave *viburnum prunifolium*, 30 drops every fifteen minutes, in hot water. Pains came on, and in two hours I delivered a false conception, consisting of a mass of myomatous, liver-like substance, adherent to an ill-formed and ill-looking placenta. Tonics. Recovery.

O. E. LOONEY.

Illinois Bend, Tex.

METHOD OF SECURING AND LABELING FECES FOR EXAMINATION BY THE LABORATORY

The following directions should be carefully adhered to:

First, give the patient a laxative (preferably a saline laxative) in the morning, before breakfast. Then, at noon, give a representative meal which consists of meat—that is muscle-fibers—with a certain amount of fat; some starchy food, as potatoes or bread; and, if possible, a vegetable of some kind containing cellulose in a recognizable form, for instance, carrots, peas, beans. Let a little charcoal be taken at this time.

Now watch the stools and send that part that contains the charcoal, noting the time it required for the appearance of this substance in the stool. It is also essential that the question of diagnosis between several things, if several are detected, be noted upon the sample, giving also the patient's name or initials, age, and date of collection.

The sample is to be placed in a small jar (usually about two ounces of the specimen is sufficient) and with the accompanying data, before mentioned, sent to the laboratory. It is probably best not to add any preservative to the feces.

As a result of giving the charcoal, we can determine the length of time the food requires for its passage through the bowel, as well as be sure that we are getting the

particular meal that we gave. From this we can determine whether or not peptic and other digestants are normal, or at least approximately so.

In pancreatic disease always give meat, but not in too large a quantity, ordinarily about two ounces of lean beef, boiled. If the test meal varies any from the above, such variations should be noted, the exact constituents of the meal given being noted upon the slip accompanying the sample.

J. FAVIL BUEHN.

Chicago, Ill.

"THAT TIRED FEELING"

And this is the way that "An Appropriate Spring Poem," published in our May number on page 553, with the various poetical comments thereto attached, impressed one reader of CLINICAL MEDICINE. Here it is:

There's a sort o' tired feelin'
Hangin' round one these warm days
And I feel like killin' time
In a thousand different ways.
I called to see the doctor—
For I wasn't born that way—
Who said, "For that tired feelin'
I should exercise each day."
He might have diagnosed my case,
But I said, "For goodness sake,
Doctor, give me something milder—
Not so gosh blamed hard to take."

DR. BRUNO AGAIN

We have referred a number of times in these pages to that extremely interesting story, written by Dr. F. E. Daniel of Austin, Texas, the well-known editor of the "Red Back"—"Dr. Bruno." We have done so because it is a book that every doctor should have in his library, and read and reread. It is not only one of the most fascinating novels that has come to our attention, but it has a great lesson to teach. Read what *The Medical World* had to say about it:

Dr. Daniel, the well-known editor of the Texas "Red Back" (*The Texas Medical Journal*), has had a quarter of a century of experience as a medical writer, and now, with amazing versatility, he gives us an intensely interesting work of fiction teeming with heart interest. He has blended with the hand of a master, philosophy, religious faith, scientific knowledge, love, romance, and cruelty into an imaginative tale which enthralled the reader from the first page to the close. We were annoyed when compelled to lay it down during our reading,

and impatient till we got back to it. The possibility of a synthetic drug inducing prolonged suspended animation is the central theme around which he weaves a weird romance. Well-known scientific facts are so deftly threaded among physical impossibilities that the reader must be on his guard lest he dream that astounding discoveries are actually being exemplified and analyzed as demonstrable truths. One feels that the mantle of Jules Verne or Rider Haggard has fallen on worthy shoulders. The doctor who starts to read this book will neglect some of his patients. We know it has thrilled us in a way we have never been thrilled since we first read *Ben Hur*. The owner will always have a book that he may hand to a friend in assurance that it will be thoroughly enjoyed; but if it is left on the waiting-room table it will surely be stolen.

You can get the book, I am sure, by writing Dr. Daniel direct, at Austin, Texas, enclosing \$1.50; \$2.00 pays for the book and the "Red Back" for a year

THERE ARE OTHERS

When business ventures fail, and you
Your wasted money sadly rue,
Remember this is ever true—
There are others.

If on a bed of pain you lie
And watch the people passing by,
Don't waste your strength with useless cry;
"There are others."

If death, with fingers icy chill,
Comes to your home against your will,
Just whisper to your heart, "Be still!
There are others."

No matter what we suffer here,
There's always someone's lot more drear;
We're likely to forget that near
There are others.

FLORENCE KENNEY EVANS.

Selbyville, Del.

MEMORIAL DAY POETRY

Two poems have come to us commemorative of Memorial Day. That by Dr. Post was written north of Mason and Dixon's line; that by Dr. Rounseville, south of it, when he was visiting in one of the southern states; on his native soil, the latter is in memory of the Confederate dead. So North and South meet as friends in the pages of CLINICAL MEDICINE.

MEMORIAL DAY

Down the long street they slowly come,
With squealing life and rattling drum;
The banner of our own dear land,
So bravely held by trembling hand,
They, marching, come at last.

With halting step and shoulders bent,
With vision dimmed and strength far spent,
What is this band so thinly lined,
Their white hair streaming in the wind—
These specters of the past?

Not such as heard the bugles blow
And, half a century ago,
When called to save our chosen land,
Sprang bravely forth, a gallant band,
To heed the trumpet's blast.

And now, with feeble, falt'ring feet,
The flag they follow down the street,
And as they pass the arch beneath,
Each shaking hand holds forth a wreath
To crown their hallowed dead.

Each year grows faint their feeble breath;
Each year their ranks are thinned by death;
And soon, beneath the earth's green breast,
The last brave warrior'll find his rest,
His last sad rites be paid.

WM. C. POST.

Maquoketa, Ia.

IN MEMORIAM

Hark! The tread, the muffled drum,
See the pageant as they come,
Bearing flowers to deck the grave
Where many a gallant warrior's laid,
'Tis a tribute to the shrine
Where glory guards th' immortal line.
Strew the flowers with tender care.
Rest! a patriot's slum'ring there.
Mark the place where rest the brave;
Hallow here a soldier's grave.
Place garlands for the brave unknown;
Side by side in the narrow home
Here a nation's heroes sleep.
Here a nation vigils keep:
There a loving hand again
Builds an altar to their fame.
While the breeze from many climes
Chants a requiem thro' the pines
We bow unto His infinite will.
Here rest th' immortals: Peace be still.

G. L. B. ROUNSEVILLE.

Milladore, Wis.

A BALLADE OF BROOKS

"Be led, where little rivers guide."
Through fragrant forests, as they stray
In music, down the mountain side;—
Hark to their rippling roundelay!
Where oreads with dryads play
In woodland aisles; where willows swing
Their fluffy catkins, silver-gray;
"Go,—in the tassel-time of spring."

When violets their robes have dyed
In tender tints, then hie away
To "little rivers" where they glide;—
Hark to their rippling roundelay!
The woodland ways are sweet in May,
When budding trees their incense fling
And nature, smiling, seems to say,
"Go,—in the tassel-time of spring."

Leave urban haunts, unsanctified,
For forest-stream; and bless the day

You follow down their silver tide;—
Hark to their rippling roundelay!
Where cascades scatter shining spray
And foam-bells tinkling music ring;
When nature calls, her voice obey:
"Go,—in the tassel-time of spring."

Naiads, your brooks I would essay;—
Hark to their rippling roundelay!
And, lured on by your beckoning,
Go,—in the tassel-time of spring."

PISCATOR.

We borrowed this poem from *The Chicago Tribune*.

A DOCTOR'S WIFE—TO HER HUSBAND

BY A DOCTOR'S WIFE

Dear husband, as I take my case
While you are battling with disease,
And facing every kind of storm
While we are sheltered, fed and warm,
I think of you and long to hear
The jingling of the sleigh-bells near.

I, waiting, long for your return,
(And watch the 'tatoes lest they burn)
And make the toast and steep the tea,
And hope your patrons paid your fee.
And put the little ones to bed
After their evening prayers are said.

And in my heart there is a prayer
That God may have you in His care
As o'er the drifted hills you ride—
Still at your work, whate'er betide,
With supper visions in your eye,
You inward give a little sigh.

"On, Mandie, on, cheer up, old horse!
I know the road is hard, of course,
But keep right at it, don't delay,
And soon you'll have your oats and hay,
And on your straw-bed you may rest,
Feeling content you've done your best."

MEDICAL HAPPENINGS

Dr. William Warren Potter, for many years editor of *The Buffalo Medical Journal*, died in March, age 72 years.

Friends of the late Prof. C. S. N. Hallberg are raising the money to clear the \$3500 mortgage on his house, for the benefit of his wife and son; \$2600 has already been raised.

And now cometh an enterprising drug manufacturer with a specific remedy "against impotency in animals." Its name is vetol and it is our old and untrustworthy friend, yohimbin, in another form.

A paragrapher in one of our local papers says that a Wisconsin sanitarium is advertised as a place where one can go "without the stigma of mentality." Evidently intended exclusively for our American "aristocracy."

The seventeenth International Congress of Medicine will meet this summer in London, under the presidency of Dr. F. W. Pavy. Write to Prof. H. Burger, the general secretary, Vondelstraat 1, Amsterdam, for information.

Are you reading Doctor Taylor's "Business Talks" in *The Medical World*? If you are not, you are missing a good thing. *The World* has saved the physicians of this country thousands of dollars which otherwise would be lost through injudicious investments. Good work, Brother Taylor, keep it up.

Apropos of the report of Caruso's peculiar ailment, reported last month, it may interest our readers to know that according to a recent press dispatch, brought to our attention by Dr. J. M. Day, Waynesfield, Ohio, "Abe Attell, the featherweight champion, had the humorous bone of his right arm broken in the fourth round of a ten-round bout with Tommy Kilbane."

At the meeting of the Council on Medical Education of the A. M. A., recently held in this city, a number of speakers seriously advised the addition of a fifth year to the course in medicine, that year to be devoted to hospital clinical work. This is undoubtedly the next move in the raising of our educational standards. I think it is along the right lines. What do you think?

At an address given before the Philadelphia Medical Club on May 4 President Taft praised the doctors of the United States army and medical men in general for the efficiency displayed in conquering disease in Cuba, in the Philippines and in the Panama Canal Zone. He found justification for the war with Spain in the stamp-

ing out of yellow-fever in Cuba, that threatened death to our southern cities.

As stated last month, Senator Owen's Senate Bill No. 1 provides for the creation of a National Department of Health. This bill differs from that introduced in the last Congress in that the executive officer, or Director of Health, is not to be a member of the Cabinet, and he is to have under him a skilled sanitarian as Commissioner of Health. This bill also provides that there shall be no discrimination between schools or systems of medicine, thus removing the principal objections raised to the former bill.

A lieutenant in the army, who was recently sent to Texas with his command, in a fit of homesickness perpetrated the following:

I want to go up north again, where northerners never
rage,
Where we never see tarantulas unless they're in a
cage;
Far away from Texas gumbo, on Lake Erie's placid
shore,
Where the rattlers cease from rattlin' and the
greasers grease no more;
Where we'll never see a cactus plant nor feel its
thorns again.
Then old Diaz and Madero and the rest can go to
—well,
I never was a hand to swear; but, surely, war is hell.

The *Chicago Tribune* says that Texas may be expected to make representation to the federal government that this poetry constitutes an act of unfriendliness to a sovereign commonwealth.

We shall be glad to have many readers of *CLINICAL MEDICINE* join us on the trip to Los Angeles, to attend the meeting of the A. M. A. We go on the Santa Fe, taking the "A. M. A. Special," which leaves Dearborn Street Station, Chicago, at 8 p. m., Wednesday June 21. This train arrives at Kansas City at 9 a. m. June 22, leaving at 9:10 a. m. There is a stop-over of a day at the Grand Canyon of Arizona. We shall arrive at Los Angeles at 7 a. m., Monday, June 26. The Association meeting begins the next day. If we can help you about sleeping-car reservations, or otherwise, command us.

We just learned of the death of an old friend of ours, Dr. F. C. Miller, Olivia, Minnesota. Dr. Miller was comparatively a young man, having been born in Stanton, Minnesota, in 1868. He was a graduate of Hamline University, and had been engaged in the practice of medicine in Olivia since 1899. We have a peculiarly deep friendship for the doctor because he was an ardent disciple of the active-principle method of medication, which he practised with unusual success in his community.

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The Illinois State Medical Society met in Aurora, May 16-18. It was well attended and the program was up to the usual standard of excellence. There was a fight on, as usual, the end of which is not yet. A bitter attack was made upon many of the Chicago Medical Schools, by the committee on education, led by Percy of Galesburg, which was resented by the Chicago delegation and suppressed. The commercial exhibits were excellent and attracted much attention. The weather was very warm.

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Last month we made the statement that the Mann bill, changing the name and enlarging the scope of the Public Health and Marine Hospital Service, had become a law. We are sorry to say that we were misinformed. It was held up in the Senate. However, the bill has been reintroduced in a modified form in the present Congress, and here's hoping that this time there may be better luck. There is no branch of the government service which is doing as much to alleviate disease and in raising the hygienic and sanitary condition of mankind, as this branch, so ably directed by Surgeon General Wyman.

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Surely every reader of CLINICAL MEDICINE will remember the beautiful article by Dr. I. N. Danforth upon The Danforth Memorial Hospital at Kiu Kiang, China, which appeared in our March issue. Since that article appeared Dr. Danforth has passed away, his death having occurred early in May. Dr. Danforth was one of the best known, as he was one of the most loved and respected of our older physicians.

He had held many important positions, both as teacher and clinician, and was an able writer on medical subjects. With it all, he was an earnest, courteous Christian gentleman. Of recent years he devoted much of his time, and a large share of his income, to the hospital in China described in the CLINIC article, and presided over by Dr. Mary Stone, the brilliant young native Chinese physician. Dr. Danforth's own connection with the hospital was kept modestly in the background in this article, and he even declined to have his own photograph used in connection with it, but now it cannot be out of the way to say that in its inception, its maintenance and even in its professional work, he was its real inspiration. Many of us who have known Dr. Danforth for years will miss him greatly.

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There are few men doing more work for humanity than Sir Wilfred T. Grenfell who has revolutionized social conditions along the Labrador coast. This man is at the same time physician, justice of the peace, merchant, missionary, and pretty nearly everything else that is good, for what is probably the largest parish in the world. *The Review of Reviews* called him a "perambulating Providence," and this does not put it a bit too strong. Dr. Grenfell has recently been giving addresses in Chicago and doubtless in other American cities, the money raised in this way to be devoted to the extension of his work. Certainly every doctor in America should be glad to help this work along. If you or your friends feel like boosting, address any one of the following Treasurers of the Grenfell Association of America: Miss E. E. White, Sec.-Treas., 14 Beacon St., Boston; Mr. Douglas M. Wylie, 412 North St., Baltimore, Md.; Wm. A. Douglass, care of R. G. Dun & Co., N. Y. Life Bldg., Chicago; Clifford Hubbell, Marine Nat'l Bank, Buffalo, N. Y.; Thornton Cooke, Kansas City, Mo.; R. P. Woodworth, Minneapolis, Minn.; J. Frederick Thomas, 902 Chestnut St., Philadelphia, Pa.; Rev. J. H. Taylor, 304 Rhode Island Ave., Washington, D. C.; W. D. Vincent, Spokane, Wash.

State-Board Examination Department

Edited by R. G. SCHROTH, M. D., 546 Garfield Ave., Chicago, Ill.

THE PURPOSE OF THIS DEPARTMENT

It is expected that in this department will be published from time to time the examination questions, or a part of them, of the various state boards, in order that the candidate may become familiar with the character and determine the scope and extent of the average medical examination, and, in a certain degree, free himself from the dread and nervousness which many feel when going before an examining board.

The candidate for a state medical license will not necessarily find in these answers an easy and short road to success in the examination, for, unfortunately, the examiners do not often repeat questions, and there are probably many hundred thousand questions which may be asked in an examination, and it is exceedingly unlikely that the same questions will be placed before him by the examiners again.

The object of publishing the questions, and answers, as stated above, is to acquaint the candidate with the general character of the examinations, to cause him to do some independent thinking, and to inspire him with confidence.

The questions given here have been taken from a number of state board examinations, and are considered a representative list, representing a fair average of the questions generally asked. If you can, without any preparation, answer 75 percent of these questions, and the marker of your paper is fair with you, you can consider yourself in pretty good shape to encounter any examining board. It is, of course, much easier to answer questions in your own office or home, than when before the examining board.

If any of the readers of *CLINICAL MEDICINE* desire to test their powers and ability in writing answers, hereafter, the following

proposition is made: A list of questions will be printed in the journal or sent you on request. Write the answers to these questions, using only one side of the paper, and send in to my office, accompanied by \$1.00, in money order or currency, for postage, mailing, and the time required to grade papers, and the papers will be looked over carefully, and graded, and mistakes pointed out to you, and your attention called both to the good and bad points.

This nominal amount is required owing to the work required to grade, the additional clerical help required, and the time required to do this work, and the test and experience thus obtained should be of inestimable benefit to you.

It goes without saying that it will be necessary for you to be honest with yourself, as there would be no advantage gained from looking up answers to the questions from textbooks, etc., and getting a high grade, for this would react against you when you come to take a *real* examination. The papers will be graded closely and no grade given which the writer is not entitled to, but on the contrary, a fair and honest mark will be given, and no more, on each paper.

R. G. SCHROTH.

Chicago, Ill.

BACTERIOLOGY

1. Describe in detail Gram's method of double staining.

(1) Prepare cover glass by taking a platinum wire and touching the suspected material and smear it lightly on the sterile cover glass. (2) Dry in air. (3) Fix in flame. (4) Aniline oil and gentian violet, to stain the germ, two to five minutes. (5) I in KI one-half to three minutes, to make the stain penetrate the germ. (6) Water, to wash off the excessive amount of stain. (7) Absolute alcohol, to harden and decolorize. (8) Eosin, to counter-stain the tissue. (9) Water, to wash off the excessive amount of eosin. (10) Dry in air. (11) Mount in Canadian balsam.

2. Give the modes of infection in (a) tuberculosis, (b) gonorrhea, (c) anthrax.

(a) Respiratory system and alimentary canal, rarely the skin.

(b) Generative organs and the eye, by direct contact.

(c) By abrasion of the skin, sometimes the gastrointestinal, canal and the respiratory tract.

3. State fully the procedure in carrying out the Widal test.

Either fresh or dried blood, obtained from a skin puncture, may be used. Dry blood-serum is first dissolved in sterile water, 50 to 100 times. A drop of the 1 to 50 serum is placed on a cover glass, a platinum loopful of germs, eighteen to twenty-four-hour-old bouillon culture of typhoid bacilli added and the two thoroughly mixed. The drop is rimmed with vaseline and the cover slip placed on a concave slide. A high-power lens is used for the examination. The bacilli first lose their motility and in about one-half hour, if the reaction is typical, gather in bunches or clumps. The earlier the reaction, the more positive the diagnosis of typhoid fever.

4. Describe the *spirochæta pallida*, state where found and give a method of staining.

It is a spiral shaped microorganism enlarging to the spirilla. Although formerly placed with the protozoa it resembles bacteria in some respects, and it has been proposed to classify the spirochæta by themselves as treponemas ("twisted thread.")

Its size is 1 to 20 microns. It has no spores; it stains poorly and can best be seen in a black background. It lies partly within and partly without a giant cell. It has not been properly cultured, inoculated or stained. It has a corkscrew-like motion. The Gruber method of staining is the method most commonly used, but it is not permanent.

5. Write at least a half page on tuberculin.

Tuberculin is a fifty-percent glycerin extract of the culture fluid on which virulent tubercle bacilli have grown. It is used for diagnostic and therapeutic purposes. The subcutaneous injection of one to five milligrams of tuberculin into a non-tuberculous individual is without appreciable effect, but in a tuberculous patient the same dose is followed by a decided reaction characterized by elevation of temperature, headache, lassitude, nausea, vomiting and chills.

In preparing tuberculin a flask is half filled with veal bouillon containing peptone Witte and four to six percent of glycerin. The surface is inoculated with a pure culture of tubercle bacilli and the flask placed in an incubator at 37° C. for from six to eight weeks. (The Hoechst Farbwerke use cultures of three or four weeks.) The bouillon after evaporation to 1/10 of its volume over a water-bath is then filtered, and the filtrate is called tuberculin. It is preserved with 0.5 percent of phenol.

The conjunctival tuberculin test according to Calmette is applied in this manner: Tuberculin is precipitated with alcohol, and the precipitate dissolved in sterile salt solution. One drop of this one-percent solution instilled into the conjunctival sac. If the test is positive it produces an inflammatory reaction and a light-gray exudate appears in from six to ten hours. This is called the ophthalmic or conjunctival tuberculin test.

Tuberculin is sometimes worked into the skin with a blunt lancet or rubbed into the skin in the form of an ointment. The former method is that of von Pirquet, the latter that of Moro. The von Pirquet, or cutaneous, test is made with 50-percent, or full-strength, tuberculin; Moro's ointment contains 50 percent in an aniline base.

The tuberculin test seems to be very sensitive, and there is a large percentage of reaction among clinically nontuberculous patients, which is due to the fact that the majority of people after puberty have at some time or another been subject to a tuberculous infection, and have a tuberculous focus somewhere in their bodies which produces the reaction.

Tuberculin may not be of value therapeutically in every case, for we must figure on the stage of the disease as well as on the condition of the patient.

GYNECOLOGY

1. Describe pudendal hernia and give the causes, symptoms, and treatment.

This is a rare condition and is due to a large inguinal canal in the female. A portion of the gut slips through the canal into the labia majora. It may contain omentum, when it will

be more solid and percussion will bring out a dull note, while, if it contains gut, percussion will bring out a tympanic sound. There is an impulse on coughing, and this is more prominent in the upright position. If reducible, it slips back with a gurgling sound. Local symptoms are weight and general distress in the pudendal region at all times and severe pain if it is impinged and is the same as a complete inguinal hernia. It may become strangulated and gangrenous. The treatment is surgical.

2. Describe the operation of pubiotomy. State for what purpose it is performed and give its advantages.

This is an operation on the pubic bone, just lateral to the symphysis. Using all aseptic and antiseptic precautions, an incision is made in the mucous membrane under the skin down to the bone, stopping all hemorrhages as we proceed. The periosteum is separated and stripped off the bone and the bone may be cut through with a pubiotome or a Gigle saw. After the operation is completed, the parts are sutured together and properly cared for. This operation is performed for removal of large tumors or cysts by way of the lower birth-canal or in obstetrics when a fetus or any part of it is too large or the pelvis under size. It has no advantages over symphysiotomy, according to many authors, but is supposed to be better because of the greater chance to make a more perfect union than when incision is made through the symphysis.

3. Give the prominent symptoms and treatment of an extrauterine pregnancy.

A tumor in the tube on one side without much inconvenience, with all the symptoms of pregnancy and irregular hemorrhage; when the mass grows there are severe, cramp-like pains in the iliac region on the affected side, and if it ruptures, there will be collapse, associated with symptoms of internal hemorrhage (surface pallor, rapid, feeble pulse, air-hunger, coldness of skin and extremities), vomiting, difficulty of vision. Treatment: Abdominal incision and removal as soon as diagnosed.

4. Name the principal varieties of congenital anomalies of the uterus.

Solid uterus, double uterus, half uterus, absent uterus, cavernous uterus, displaced uterus, absent or duplicated parts, as tubes, cervix, body fundus.

5. Give the etiology, symptoms and treatment of stenosis of the cervix.

Congenital causes as well as uterine displacements, particularly antelexion, or tumors or scars in cervix, due to previous infection or laceration.

Symptoms: Amenorrhea, painful menstruation, leucorrhœa, bearing-down pains and sterility. Treatment: Dilatation and curetment of cervix, or otherwise remove the cause.

6. Outline the treatment of shock associated with abdominal section.

In ordinary shock, raise the feet and lower the head, unless the position causes cyanosis. Wrap the patient in hot blankets, and surround him with hot bottles. Hypodermoclysis or intravenous infusion of normal salt solution, or enteroclysis. Bandage extremities. If shock develops during operation, operation must be hurried or stopped and proper treatment begun at once. If shock is due to hemorrhage, stop the hemorrhage. Oxygen inhalation, strychnine sulphate, 1-30 grain, hypodermically. Alcohol inhalation, fresh air by opening windows, relieve pressure around neck and waist, artificial respiration, elevate lower jaw over upper jaw, cardiac massage, pull the tongue out eighteen times per minute.

LARYNGOLOGY

1. Describe the appearance and effects of the destructive action of syphilis upon the larynx.

The cords may be involved either with gummata, mucous patches, or there may be round-cell infiltration, ulceration, or there may be only congestion; however there may be proliferation of the connective-tissue cells, causing the cords to become thick, heavy and sluggish.

The epiglottis may show the same picture, but may also show papillomata or condylomata wart-like excrescences, which

may be yellowish in color and the size of a pea; there may be cicatrices and adhesions, as well as erosions of the epiglottis, or a part may be eaten away. This is true of all other parts, for syphilis respects neither tissue, age nor sex.

Syphilitic lesions of the larynx are usually bilateral. The irregular ulcers of the syphilitic larynx are surrounded by a dark zone of congested tissue, bathed in a purulent foul secretion.

The appearance varies according to the degree of involvement, the virulence of the attack, as well as the susceptibility of the individual and the length of time it has existed.

MEDICAL JURISPRUDENCE

1. In the case of a newly born child found dead shortly after birth, what evidence would indicate that the child was born alive?

Inflation of air-cells of lungs. Lungs are larger, edges more rounded, lung floats when put in water, it has a bright red color, thorax is arched.

Foramen ovale of heart is closed. Obliteration of umbilical vein, ductus arteriosus or ductus venosus.

2. Differentiate between melancholia and mania.

Mania is a form of insanity characterized by an exalted emotional state, wild excitement, hallucinations, delusions, and violent tendency to insanity with a corresponding exaltation of other nervous and functional disorders occurring, especially in females. Melancholia is characterized by mental depression, and by a profound depression of the nervous system and functions of the body.

OBSTETRICS

1. What is the effect of premature rupture of the membranes?

"Dry labor." Slow dilatation of the os. Increased tendency to cervical laceration. Prolapse of the cord. Inertia of uterus. May be serious to child. Infection is more likely to occur.

2. Name causes of hydrocephalus. What is the frequency of its occurrence?

Due to syphilis or tuberculosis; however, it has been known to follow acute infectious diseases and injuries. Its occurrence is comparatively infrequent.

3. Describe the female pelvis.

The pelvis is composed of 2 ossa coxae, sacrum and coccyx. It is broad, shallow and roomy, the tubera ischii are far apart, as are the iliac crests and the trochanters of the femur. The bones are larger in proportion to the individual than other bones of the body, they are delicately curved and more flat and are more smooth than in the male.

4. Describe the peritoneal covering of the uterus. Name the ligaments of the uterus.

It is a dense, white, shining, glistening mass of white fibrous connective tissue firmly attached to the uterus at all parts, except the lower anterior one-third: upon the free surface is a layer of endothelial cells lying edge to edge upon a basement membrane. Ligaments of the uterus are 8 in number: 2 anterior, 2 posterior, 2 lateral or broad, and 2 round ligaments, as follows: anterior, or vesicouterine, posterior or rectouterine, 2 lateral or broad ligaments, 2 round ligaments or false ligaments.

5. What symptoms herald the approach of the menopause?

Hot flushing, irregular profuse hemorrhage, bloating, ulceration of uterus and cervix, gastrointestinal disturbances, disturbances of the special senses, in fact, any part of the apparatus may be affected and the symptoms may vary from a slight headache to a severe case of hysteria or insanity.

6. Describe a normal labor.

In primipara, the stage of dilatation lasts about sixteen hours and in multipara, about ten or eleven. The stage of descent in the primipara lasts about two hours, and in multipara, about one hour. The membranes rupture after full dilatation has been effected. At first, the small fontanel is found in relation with the left acetabulum, and during descent it gradually

rotates until it is under the arch of the pubes. The third, or placental, stage of labor lasts about one-half hour. The child cries as soon as it is born.

7. Describe the uterine changes that take place during uterogestation.

Hypertrophy of the muscular tissue; hyperplasia of the peritoneum; increase of nerve-elements by the development of the neurilemma, hypertrophy and hyperplasia of the lymphatics. The length of the uterus increases from 2½ to 12 inches, the capacity from 1 cubic inch to 100 cubic inches, its weight from 1 ounce to 2 pounds or more. There is a slight right sided rotation and tilting. The blood supply is vastly increased.

8. Give the differential diagnosis of extrauterine pregnancy.

From pregnancy: In extrauterine pregnancy, the menses continue, mucous plug is absent and tumor on one side without much inconvenience. Uterus is empty.

Ovarian cyst. Further to one side, lasts longer, and may be much larger, and fluctuates more distinctly.

Ovarian fibroid: Further to one side, lasts longer and may be much larger and is hard.

Lipoma: Further to one side, lasts longer and may be much larger; doughy feel to fingers.

Abscess: Accompanied by chill, fever, and constitutional disturbances.

Appendicitis: Tumor mass way over to the right and is very sensitive, has febrile symptoms, pain, localized at McBurney's point.

Other points may be mentioned but these serve to illustrate.

9. Give the various causes of prolonged labor, and outline the general treatment.

Defects in the musculature, or in innervation, or some mechanical interference with the action of the muscle. Rapidly repeated pregnancies, twins, hydramnios, hemorrhage, fatigue, emotion, fibroids, adhesions, uterine displacements, mental conditions, rigid os. Treatment: If mild, quinine. If excessive pain prevents contractions, chloral, morphine bougies, dilating bags and forceps. Small quantities of food, with a little alcohol, have been recommended. Guard against post-partum hemorrhages. If the condition is suspected, the patient should be given strychnine during the last two weeks of pregnancy. The main treatment is to remove the offending cause.

10. Write a page on the duties of the physician during the second stage of labor.

The second stage of labor, or stage of expulsion or descent, extends from full dilatation until the delivery of the child. It may last from a few minutes to a couple of hours, and ends with the expulsion of the child. The pains recur during this stage at intervals of from one-half to five minutes and are associated with abdominal contractions. During the second stage of labor, the patient should remain in bed. In multipara, if the membranes fail to rupture, after full dilatation of the os, they should be broken in the interval between the pains. When the head reaches the perineum, care must be exercised to prevent lacerations. When the head is born, support it until the uterus has time to contract on the retained fetal body, and until the shoulders are born.

The physician, after assuring himself that the labor is normal, should see that the case continues to progress normally and should practise and demand from the nurse or assistant, the most rigid asepsis and antisepsis. All unnecessary examinations should be avoided. The perineum should be guarded to avoid lacerations. After the delivery of the child, its eyes and mouth should be cleansed and the cord ligated. Uterine inertia and hemorrhage should be watched for. Pain may require chloroform or hyoscine, morphine and caetan. It may be necessary to apply forceps. As soon as child is born, the cord should be removed from around neck, respiration established, eyes, nose and mouth washed, the child wrapped up and kept warm.



CLINICAL · MEDICINE POST-GRADUATE SCHOOL OF THERAPEUTICS

George F. Butler, A. M., M. D., Director
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Alfred S. Burdick, A. B., M. D.
William F. Waugh, A. M., M. D.

PART III.—LESSON TWENTY-ONE

RACHITIS AND SCURVY

In the treatment of rickets and scurvy, nutrition holds a most important place. It is only by treating children from the standpoint of individuality that the problem of the nutrition of childhood can be solved.

The Successful Nourishing of the Child is to be found in the fact that variety in the child's food is demanded for successful nutrition. The striking influence of fresh air in the nutrition of children is a common observation of those who see city children transported into the country or to the seashore, during the summer. It is rarely the case that a sick child properly fed and kept at absolute rest in the open air does not speedily improve. The assimilation of nourishment is powerfully promoted by massage, accompanied by the rubbing into the skin of nutritious material. This matter will be gone into more fully later.

The value of baths in promoting nutrition must not be overlooked in dealing with children. In cases of ill-developed children with sluggish circulation, cold skin and imperfect digestion, baths with friction are of the utmost value. This matter of hydrotherapy will be taken up under that heading.

The remarkable *influence of the nervous system* is rarely so well illustrated as in the

nutrition of children. Everyone who has to deal with children will notice how readily assimilation is stopped by sudden anger or fright. Many cases where children are ill nourished may be traced to the ill-temper of a child's nurse who vents her impatience upon her little patient. The rule should be an invariable one with children that they are to be fed slowly and without annoyance, and that they remain unmolested for one-half to one hour after a meal.

The most interesting point in connection with the nourishment of children lies in the formation of the child's *proper habits of eating*. It is very important that the child be taught to eat properly and at regular intervals.

Sleep has a remarkable influence on nutrition. The ill-nourished child cannot sleep and the sleepless child cannot assimilate, and precautions must be equally taken against both these abnormalities. If sleep can be procured, waking may be followed at once by the administration of foods, and in obstinate cases the first beginnings of renewed digestion will often follow the child's naps.

This problem of nutrition is a very important one, as I have stated in the beginning, and only those who have had experience with ailing children can appre-

ciate the complexity of the problem embraced in the proper nutrition of the child. No dogmatic rules apply to all cases, and he who would successfully bring about health in childhood must cultivate patient observance of each individual peculiarity of his patient and tactful use of the means which the child's environment affords. No more interesting and gratifying instances occur in medicine than to witness the gradual change from pceevish ill health to the happy and contented condition characteristic of the properly nourished child.

Tendency Among Children to Sickness.—It is commonly admitted that children are delicate. Some say all children are delicate. Such statements are made upon general experience and upon the person's knowledge of infant mortality. Boys are found, during infancy, to be the most delicate and difficult to rear. It appears, then, that we are right in speaking of infants and young children as delicate, because they tend to die in large numbers, particularly in the case of boys, who suffer most from all developmental irregularities.

Rickets is a condition much more commonly met with among boys. The tendency to early death is, however, by no means the only form of child delicacy. We have rickets, bronchitis, gastric and intestinal disturbances, catarrh, eczema, glandular enlargements—that is, affections of the adenoid tissues—anemia or altered blood conditions, tubercles, etc. Further, a multitude of so-called diseases or pathologic affections of certain tissues. Then there are the cases of infantile convulsions, laryngitis, infantile paralysis, and after six years of age, the liability to chorea. A long list might be given of child ailments dependent upon more or less localized pathologic changes in certain tissues, and yet we should not have catalogued all the conditions affecting children whom we classify as delicate.

Management of Delicate Children.—

As to the treatment and management of these classes of delicate children, I wish to insist on the necessity of careful diagnosis of the child's condition as a step preceding arrangements for its management. I am speaking of children in whom a careful

examination shows no disease of any organ or tissue, but who remain either pale, thin, small or delicate, or else present indications of nerve debility or undue action.

Having arranged for the child's appropriate clothing, prescribe a diet as full as it can digest and to contain much animal food. Then arises the important and difficult question of managing the nervous system. Much animal food is generally required and should be present in their meals. The child is often to be urged to eat, and if of the neurotic type, should be watched to see that the food is taken. Fat food aids the increase of weight when that is deficient.

If the child is long in getting to sleep or wakes early, food should be supplied at the bedside. Early, regular and long hours of rest in well-ventilated but darkened rooms are appropriate for poor sleepers and early wakers. In the day it is as necessary to see that there is subdued light in the rooms used. These needs require special attention in city homes. For the purely neurotic children, country life and boarding schools are sometimes most appropriate. Much depends on the characteristics of the home and the parents.

The two diseases which I discuss this month, namely, scurvy and rickets, are largely dependent upon and caused by improper feeding.

Infantile Scurvy is a disease of modern times, and it is attributable to altered conditions arising from overcivilization and from the crowding into cities, which makes it difficult or impossible for many children to be fed in an ideal manner. There has been a steady diminution, during the last half century, in the number of children who are fed in the natural mammalian fashion at the mother's breast.

As the result largely of artificial feeding, scurvy has appeared among children, especially among the better classes, so called, and although cases are by no means common, they are steadily on the increase. Owing to the frequency with which the disease is found in children suffering from rickets, the condition is still often described as "scurvy rickets;" but as Barlow showed, the scorbutic symptoms are quite

independent of rickets and the latter may be entirely absent. It is no more appropriate to speak of "bronchitis rickets," and it is better to designate it as infantile scurvy. The lesion occurring in *infantile scurvy* presents no essential difference from those in the above form, and it is the general agreement that we are dealing with the same disease.

Cause and Prevention of Scurvy.—

Scurvy generally was found to break out when fresh food was unattainable, as for instance on long sea voyages, during sieges in war, during the long winters in arctic regions, among armies when they were stationary and all local supplies of fresh green food had been used up. It has also broken out in recent times in camps of coolies employed in outlying places. It has been shown by Nansen and others that even when fresh vegetables are not available, scurvy can be prevented by partaking abundantly of meal. It has also been long known that outbreaks of scurvy would be at once stamped out and that the sufferers would promptly recover as soon as fresh vegetables, meats or fruit could be obtained, as when a siege was raised or when the onset of spring awakened vegetation. Subacid fruits, potatoes, green vegetables, and fresh meats have especial value.

Since absence of fresh food promotes and its provision cures scurvy, we speak of fresh food as having "antiscorbutic" properties. Patient chemical investigation has failed to detect any body present in the vegetables and fruit which by experience are found to be most antiscorbutic. Nor has any satisfactory substitute for fresh animal and vegetable food or their juices been found which will cure scurvy.

The nature of the antiscorbutic property is still a mystery and we are not yet in a position to speak positively as to whether it is some vital property outside of our present methods of investigation or some definite chemical body. It is probable, however, that, in addition to the chemical action there is also a positive antitoxic effect of the food taken. For it must be remembered that during outbreaks of scurvy there has not only been privation

so far as fresh food is concerned, but the food that was procurable during sieges, on shipboard, etc., was of poor quality and unwholesome.

During a recent arctic expedition scurvy was successfully warded off for a long time, but the preservation of the canned food was defective, and as soon as they had come to the end of what was sweet and had to use some that was tainted, scurvy broke out. Indirect evidence, if there is some toxic factor required as well as a nutritive one, is supplied by the curious fact, pointed out, I believe, by Osler, that in cases of starvation due to privation, to disease, or to fasting for public exhibition, scurvy does not occur.

Factors in Infantile Scurvy.—In infantile scurvy there also are the same two factors, namely, first, absence of a sufficiency of fresh milk, often none at all, and, second, the use of food which has undergone considerable alteration. So far as I know, scurvy has never been observed in children that have been entirely breast-fed, except during sieges when the mother was herself suffering from scurvy. Nor does it occur in children fed with unboiled fresh milk, although, as Cheadle has pointed out, the antiscorbutic power of milk is low and large quantities are required to perfect the diet; but it does occur, and sometimes severely, when the diet consists of only a small amount of unaltered milk together with some preserved patent food. Indeed, in infants the second factor, toxic effects of alteration in the food, seems to play a larger part than in adults.

Patients with infantile scurvy have generally been fed on sterilized or peptonized milk or on some of the exsiccated proprietary foods. Condensed milk, unless infants food is given as well, has not caused it in any case I have seen, and I have seen it only once, and then in the mildest form, where the child was fed entirely on pasteurized milk.

Not long ago there was reported an epidemic of infantile scurvy in Berlin, where pasteurized milk was given, but it was found to be confined to children whose parents, as an additional precaution, boiled the pasteurized milk thoroughly after

it was delivered to the house. Out of twenty-five severe cases seen in hospitals and private practice, nineteen were taking some kind of dried infant's food as a staple diet, seven having a certain amount of fresh milk as well. The remaining six were taking sterilized or humanized milk, or milk sterilized by prolonged heating.

Cheadel gives full details of the previous treating of sixty cases of scurvy observed by him. Of these, forty-six were taking various patent foods, thirteen taking a certain amount of milk, said to be fresh, at the same time, and among the remainder three were taking peptonized and seven sterilized milk. It is clear that without artificial feeding we should have no scurvy; it is equally true that a certain proportion of artificially fed babies develop scorbutic symptoms.

Predisposing Causes.—What the predisposing causes in this minority may be we have at present no knowledge. At one time it was suggested that syphilis was a predisposing factor, but this has been disproved, nor does it appear that rickets has any effect in determining the outbreak of scurvy, for all rachitic symptoms may be absent, and the frequent association of rickets and scurvy seems to be due to a common cause—unwise dieting. The fact remains, that when a child is artificially fed, there is risk of scurvy. This can be satisfactorily obviated by supplying the child with milk as little altered as possible, after it is drawn from the mamma of the animal supplying it.

The Treatment of Infantile Scurvy is simple. First, stop all food that is not absolutely fresh. Second, give the child abundance of fresh food. The appetite is usually very good and unless the mouth is very sore the child will take such food freely. Unboiled milk, orange or lemon juice, suitably sweetened, fresh cream, and raw meat juice are the best to employ.

For effective antiscorbutics we must have recourse to vegetable juices. Fresh green vegetables, so efficacious in the scurvy of adults, are not available in the case of young infants from six to eighteen months old, the period during which the disease usually appears. A most efficient sub-

stitute is, however, available in potatoes, which have been shown to possess very remarkable antiscorbutic power. Even young children can usually take these, when they are properly prepared, without digestive disturbance. The potato should be well steamed and reduced to light floury powder by rubbing through a fine sieve. This should be well beaten up with warm milk to the consistency of thin cream and should be added to the regular food, beginning with a small teaspoonful to a bottle. The quantity may be gradually increased to a dessertspoonful, or even to a tablespoonful, in children above a year old, if it agrees.

Another effective way of feeding, although less rapid in its action than the preceding, is to administer the vegetable juices through the medium of beef tea or chicken broth, in which potatoes and carrots have been boiled and subsequently strained out. A small cup of this may be given once or twice a day.

The fresh element in diet should be further strengthened by the addition of the juice of raw meat, which possesses antiscorbutic power, although, like milk, not in a high degree; and similarly it is unequal alone to the task of effecting a rapid cure of scurvy, or of preventing it when a small quantity is the sole addition to an otherwise scurvy diet. This comparative feebleness of raw-meat juice and milk in antiscorbutic power has sometimes led to erroneous conclusions as to the nature of the disease, when it arises where milk and raw meat juices have formed a small portion of the diet or have failed quickly to relieve it. Milk and raw meat juice are in fact only efficient when given in large quantities, and even then are much less active than vegetable juices.

Blood-Building Value of Meat Juice.—Raw-meat juice has, however, a special value in these cases from its hemic virtue. It contains iron in the most assimilable form, in its hemoglobin, and is the most powerful of all remedies for the anemia constantly present, and often extreme. The juice should be prepared by macerating the finely minced pulp of raw beef in an equal quantity of cold water for half an

hour, and then extracting all the liquid through fine muslin, by twisting it. The straining is necessary to avoid danger of tapeworm, by removing possible hydatids. It should be freshly made at the time of using, for it quickly undergoes decomposition and if kept acquires poisonous properties.

Grape juice, orange juice, lemon juice, and baked apples are useful adjuncts especially in the case of children above a year old. When potato pulp and raw-meat juice are given and well borne the result is immediate and almost magical. If the gums are spongy and swollen, all signs of this disappear in the course of a few days, swelling of limbs goes down, and tenderness subsides. In the course of a week or ten days the child no longer dreads handling or moving and in the course of two or three weeks is practically well, in striking contrast to the slow progress of simple rickets under similar dietetic treatment. In addition to antiscorbutic diet, fresh air and sunlight, as in the case of adult scurvy, are useful aids, although diet alone is certainly and rapidly curative.

Little Local Treatment Is Required, beyond steadying the limbs by sand-bags or by loosely encasing them with sheet-lead; or what is perhaps fully as good, is wrapping the limbs affected in cotton-wool, keeping the child absolutely at rest on a soft pillow and preventing the movement of the limbs, which causes pain and therefore "wear and tear."

The tenderness may be relieved, especially if the limbs are hot and uncomfortable from recent periosteal or muscular extravasation, by the application of warm compresses. As a rule, however, no applications are required. Such measures as massage, or stimulating applications, are usually injurious.

Weak peroxide of hydrogen lotion is a useful application for the stomatitis. A few drops of tincture of opium or a very small dose of codeine, or better yet for small children, Waugh's anodyne, may be necessary if the pain is very acute, but the rapid improvement if the proper diet is provided renders sedatives unnecessary in the great majority of cases.

As a rule no drugs are required, although quinine may be tried for the prostration, and atropine will check the free salivation, if present. Burggraave recommends four granules of strychnine sulphate a day, and arsenate of iron and hydroferrocyanide of quinine. To combat hemorrhage, tannic acid in small doses every hour.

Whether you use drugs or not, it must be remembered that rapid improvement is not to be looked for unless all preserved foods are omitted from the diet. I know of one case in which, although fresh milk, beef juice and orange juice were freely administered, the pains did not subside until the patent foods which had been persisted in were stopped. As soon as this was done the subsidence of all scorbutic symptoms was immediate.

The potassium iodide, which is sometimes given with the mistaken view of aiding the absorption of the subperiosteal swelling, is distinctly harmful. Iodide of iron is little less objectionable. It, like the potassium iodide is depressing and if pushed far enough eventually produces in children a cachectic or purpuric condition. Codliver oil is useful in the later stage for any underlying rickets which may exist. In the active stage of scurvy it is better omitted, as it is apt to interfere with the ample ingestion of fresh foods.

Rickets Is a Preventable Disease.—Rickets in its ordinary form, says Dr. Cheadel, being essentially a diet disease, although frequently aggravated or intensified by external injurious influences, is nevertheless a preventable disease. It cannot be stamped out until poverty is stamped out. A "rickety" diet is cheaper and less troublesome than a "nonrickety" diet. In great cities, especially where the disease is most prevalent, milk is dear and often largely deprived of cream, while the other factors of defective health conditions prevail there likewise. The disease can, however, be absolutely prevented in most cases, and the fact that it is abundantly found in children of well-to-do people, although it is less common and less severe in this class than among the poor, is a grave reflection upon those responsible for its occurrence.

Rickets has its origin, almost invariably, in certain errors in bringing up by hand, either, first, in the use of artificial foods, which are deficient in the most important elements of structural growth, or second, in the administration of foods which, although they contain the essential elements in sufficient quantity, contain some of them in a form not easily digested. In cow's milk, for example, all the essential elements are present, but the casein is liable to set up gastrointestinal disorder, with vomiting and diarrhea, and thus the elements in question although present in ample quantity in the food are drained away undigested and unused. In the majority of instances the two faults are combined.

In order to avoid the recurrence of the disturbance which the latter excited, a diet sufficient in the necessary elements is substituted for the sufficiently rich but indigestible one. The great point in the prevention of rickets, especially if the child has to be weaned soon after birth, is to take the utmost care not only to give a food which is properly nutritive, but one which will not by its indigestibility set up gastrointestinal trouble. Correct feeding, namely, fresh food, with all the essential elements in due proportion, in a form which a child can readily digest so that it produces no gastric disturbance, is the chief point in the prevention of rickets. But in addition to this the other tenets of a healthy existence must be observed also. Sunshine and light are powerful agents in aiding vital processes and are of immense importance, together with fresh air, well ventilated sleeping-rooms, and warm clothing for body and limbs. These essentials to full vigor of growth are very imperfectly secured, even among the higher class of people. Nurseries are frequently overcrowded and not infrequently, for the sake of convenience, the poorest rooms are assigned for the purpose. Arms, legs and neck are left bare and linen clothing used when warm woolen clothing is required.

Curative Treatment.—As in the case of prevention so in the cure of rickets the treatment is essentially hygienic and chiefly dietetic. Drugs play a secondary part.

As a rule far too much reliance is placed upon them and children are drenched with codliver oil, iron, patent foods or lime water, often to the disturbance of digestion and the impairment of natural appetite and consequently of nutrition. Such remedies are useful and have their place, but they are by no means essential or of prime importance in most instances.

Drugs are in reality chiefly used in the treatment of complications. It may chauce that the child is unable to digest the nourishment proper for its age, as for example the element of cow's milk with water of strength sufficient for growth and nutrition. In this case a deficiency of fat must be made up by the addition of cream and the cream should be continuously and gradually increased from a few drops to a dessertspoonful in each bottle required, the quantity regulated according to the age of the child, and its power of digesting the amount required to raise the food to the full standard of three to four percent, fostered by proper medication.

Use of Beef Juice.—The proteid is best increased by the addition of raw-meat juice. This is the most easily assimilated of all proteid matter and has the additional advantage of being the most useful for anemias, probably by virtue of the iron of the fresh hemoglobin.

Raw-meat juice should be prepared by soaking finely minced beef in an equal quantity of cold water for half an hour and extracting all juice through a fine muslin in the same way as described under scurvy. A teaspoonful of this should be added to the bottle for a young child, and as it does not keep well and must be freshly made each time, may, if necessary, be given once a day in a larger quantity, a dessertspoonful up to a tablespoonful according to the age and requirements of the individual patients.

In the case of the poor, cream or even good milk containing a due proportion of cream is out of reach and codliver oil may have to be given in its place. With older children, fat boiled bacon or the liquid fat of broiled bacon forms a most digestible and satisfactory substitute. If the child is wasted as well as anemic, some form of

malted food, preferably one made from entire-wheat flour should be added to the milk.

In the majority of cases of rickets, even if the diet be one that includes the standard elements in correct proportion, an increase in the amount of assimilable fats (either in the shape of cream or codliver oil) and raw-meat juice will greatly quicken the rate of recovery, care being taken not to overtax the child's digestive powers. Finally, in cases where the limbs are so tender as to give rise to a suspicion of incipient scurvy, and indeed in all cases where there is marked feebleness and anemia, it is well to give some fresh vegetable juices. This is best done for young children in the way previously described, by boiling potatoes and carrots, and giving the juice with teas or broths. To children of eighteen months or more the vegetables themselves may be given if well boiled and thoroughly mashed.

Drug Treatment.—Codliver oil is useful in some cases, especially when good milk and cream are not obtainable or not well borne, but it is to be regarded rather as a food than as a drug. So far as remedial power is concerned it appears to possess no advantage over other animal fats, such as those of cream and bacon. Codliver oil is frequently given in too large doses so that it interferes with digestion or sets up diarrhea. It is to be remembered that a rickety child is prone to gastrointestinal catarrh and one teaspoonful of oil twice a day in addition to proper diet is sufficient for a child two years old. The oil may be rendered less laxative by the addition of an equal addition of lime water, with which it forms an emulsion. If, however, the codliver oil causes undue looseness of the bowels it does harm rather than good and should be discontinued. The diarrhea interferes with absorption of nutriment and drains it away.

Iron is useful for anemia and may be given with codliver oil, although it is doubtful if preparations of iron are as valuable as raw-meat juice as the means of restoring red blood corpuscles and their hemoglobin. The earthy phosphates are present in ample quantity in milk and in

the farinaceous preparations made from wheat flour or oats, and they are probably most easily assimilated when administered in foods. In some cases of more extreme disease or where food is taken in insufficient quantity it may be well to give lime salts in the form of calcium lactophosphate or the compound syrup of hypophosphites. Experience shows that lime water is quite useless in this respect and that the salts must be some form of phosphate.

The sulphocarbolate of lime, gr. 1-4 to 1-2, may be given from three to six times a day and this salt may be continued for months, or the lactophosphate of lime, 1-2 to 1 grain three or four times a day, may be continued for a year or more.

Phosphoric acid and phosphate of iron may be given in the drinking water, the daily dose being ten drops of the dilute acid and one grain of the iron. Castro recommends lime phosphate and lime and sodium pyrophosphate. For diarrhea, iron phosphate and pepsin. Burggraave recommends hypophosphite of lime, arsenate of strychnine, and iodide of iron, three granules of each every day, in three doses. In some instances the bitter tonics, such as the triple arsenates of iron, quinine and strychnine, are useful for the purpose of giving tone and appetite. Iodides as a rule are contraindicated in diseases of degraded nutrition, like rickets, unless there is a syphilitic infection. Phosphorus has been recommended, but if given it must be dissolved in olive oil and given in extremely small doses, beginning with 1-125 grain in order to avoid gastrointestinal catarrh, since it acts as a local irritant to the mucous membrane.

Massage Is of Great Service in the treatment of rickets. It improves the nutrition of the tissue by increasing the flow of blood in the part, thus aiding the fresh nutritive material. In cases where the condition borders on scurvy, with tenderness of the limbs from persistent engorgement, massage is not available.

Baths are of service in improving the circulation, aiding nutrition and giving tone to the nervous system. This will be discussed under hydrotherapeutic treatment.

Clothing.—As the bodily temperature in rickets, where no complications are present, is often persistently subnormal, the preservation of body heat by appropriate clothing is an important element in the treatment. Not only is temperature below normal, but the heart-muscle is feeble, arterial tone impaired and the general circulation depressed. Thus the child suffers from coldness of the extremities, and is easily affected by surface chill. The cooling process is further favored by profuse perspiration, whereby congestion of the internal organs is readily produced. The condition of the growing bones is also unfavorably influenced by coldness of the limbs.

The underclothing should be of a soft woolen material, the arms and neck being kept covered, even indoors, by long sleeves and high-neck dresses, and the legs by drawers or leggings. The only modification, on going out of doors or for change of season, should be in the matter of the thickness, not in the nature of the material. A night-dress of fine flannel is advisable, so that lighter bed-clothes may be used, and the chilling avoided which is apt to result when the child throws them off.

Fresh Air.—The value of abundance of fresh air in retaining the health of children is very generally acknowledged, but practice falls greatly behind principle in this respect. Delicate children, especially those with a tendency to catarrhs, and rickety children are often kept too closely indoors; and the temperature of the room and house in which they live is kept too high. The chief reason why the child takes cold in such cases is the change from the warm atmosphere of the room to the colder air outside, the skin and mucous membrane being morbidly hypersensitive.

Another point of equal or even greater importance in the treatment of rickets is the ventilation of the rooms and especially of the sleeping-rooms. In the case of a rickety child the cubic space allowed in the sleeping-room should be ample or even excessive, eight hundred to one thousand cubic feet, and the room should be warmed by a good open fire so as to assist ventilation by a free out-draught, and not by stoves or hot pipes in any form, if it can be

avoided, which injuriously affects the quality of the air.

The effect of sunlight is probably as potent or more potent than that of fresh air. Light, and especially full sunlight, is as important to the cure as to the prevention of rickets and the removal of a child thus suffering to a bright and sunny climate is of great value in hastening its recovery.

The Treatment of Deformities comes largely into the province of the surgeon, and it is not necessary to speak of it here at any length. It may, however, be pointed out that care during the early stage does much to obviate deformity and, secondly, that the deformities tend to disappear. If the bending be not great in degrees, many bent bones become straight again.

Treatment of Concurrent Disorders.—Gastrointestinal disorders are common and are of importance as leading to malnutrition in two ways, by imperfect digestion and absorption, and by the draining away of nutriment by means of vomiting and diarrhea. Here, again, the main point in treatment is the regulation of diet. Inability to digest the casein of cow's milk is the most direct cause of gastrointestinal disorders in young infants.

The treatment of diarrhea and other gastrointestinal disorders arising as complications of rickets should be treated as if they occurred independently of the disease under consideration.

Pulmonary Disorders.—The treatment of these complications should proceed on the ordinary lines adopted in such conditions. It is well, however, to call attention to and to emphasize the fact that all depressing remedies are badly borne by rickety children. These should be avoided. Also, the cure of the rickety state itself by correct dieting should proceed as far as practicable, step by step, with that of the immediate pulmonary trouble in order to prevent the recurrence of such disorders in the future.

Nervous Disorders.—Laryngismus, convulsions, and tetanus, which arise out of the rickety state, involve a certain risk of life. In these cases remedial measures must be carried out on three distinct lines concurrently: First, to remove

any source of irritation which may be a cause of the disturbance. This is far more frequently in the alimentary canal, in the form of undigested foods or of an irritated catarrhal condition of the mucous membrane with consecutive diarrhea. Another common course of reflex irritation of the cord, sufficient to produce convulsions in a rickety child, is that of teething.

Second, to soothe the abnormal excitability of the central nervous system and keep it dulled until the source of such irritation is removed and the stability of the centers established. For this purpose, Waugh's anodyne or a decided hypnotic is required; chloral and a bromide may be found useful. If bromides are given they must be diminished in quantity or omitted after a time in order to avoid exciting the well-known pustular eruption of the skin. Chloral or Waugh's anodyne may be continued as long as is necessary if care be taken to reduce or stop them if undue drowsiness appears. Laryngismus and convulsions may be treated in the same way and by the same measures.

The third point in treatment is to proceed with the cure of the rickety state by appropriate diet and regimen.

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TREATMENT OF RICKETS AND SCURVY

A woman employed as a quasi-domestic in the family of a wealthier relative was found by me while punishing her infant, a babe less than a year old. Inquiry developed that the child's "naughtiness" consisted in the fact that it refused to sit up as it had done, but cried a great deal, to the annoyance of the family. Then the diarrhea that had affected baby for weeks entailed more work and worry, and refused to be controlled by paregoric or astringents.

I have always looked upon this as a typical case of rickets. The wide fontanels, the sweating about the head during sleep, emaciation, abundant thick urine, and moderate fever had not attracted the mother's notice, although the most cursory examination revealed these evidences of the malady.

The causes were present—lack of attention, too little sunlight and fresh air, diet largely of tea and rice water; anger, and physical pain inflicted as punishment for the endeavor to call attention to his needs.

When and how may we teach the people that the child's needs are not crimes?

Is it ever justifiable to strike a little child?

A real mother can give most doctors points as to the influence of digestive disorders in initiating the irritated state of mind that underlies naughtiness. Rhubarb and ipecac have prevented more juvenile sins than have all the lecturing ever given by solemn inoramuses.

The mother got the needed enlightenment as to the child's condition and her own duties. She was sent with baby into the country where he could have milk warm from the cow, fresh raw eggs, lentil soup, oatmeal, which is rich in lime; hot salt baths daily, with the gentlest massage where it did not give pain; a generous allowance of sunlight applied to the naked body during the warmer hours; emulsions of codliver oil with hypophosphites and pancreatin; and minute doses of zinc phosphide for one week out of each month. Besides, he received tridaily doses of a good malt extract at the beginning of each feeding. For some reason no remedy more effectually controls this diarrhea than this. Drop your opium and astringents and even your antiseptics, and rely on digestants—diastase, pepsin, lactopeptine powder. Do not wait for the disease to develop but take the alarm when any infantile diarrhea proves obstinate to your favorite mixture of rhubarb, ipecac and alkali—neutralizing cordial. An infantile diarrhea that gets worse on paregoric is rickets, as an adult one in such a case is tuberculous.

Scurvy is a thing of historic interest. The voyagers of Anson's day suffered from it. Captain Cook saved his crew by using the leaves of every nontoxic plant he could find growing on the desert islands of the ocean. Even the fresh blood of birds has proved antiscorbutic. The causes are so well understood and the modern voyager is so short a time out of reach of shore markets that scurvy would seem an

anachronism. Yet it does occur, and all the more since we are not apt to look for it. Many an invalid is kept far too long on the sick diet. I fully sympathize with the little girl who after due deliberation said to her friends: "I give you notice that from this time on I take no more nourishment. I want something to eat."

Professor P., of the faculty of the University of Pennsylvania, had been ill for several months with obscure and anomalous symptoms. Wood solved the puzzle with one of those flashes of brilliancy that characterized him. He said: "P, what have you been eating?" The reply was: "Only beef and coffee."

"You have the scurvy," was the great clinician's judgment; and on the instant all recognized the correctness of the diagnosis. Nobody had thought of it before.

Gross was accustomed to say that he never knew of an adult recovering full, robust health on a limited diet; that the needs of the modern man were so multifarious that only the greatest possible variety of foods gave the best results. Take the appetite as the guide, and it is only exceptionally wrong, and we find that any food grows distasteful when too long repeated. Any new form of bread tastes better than the one we use daily. Any new breakfast food is relished—and possibly the purveyors do not appreciate this fact!

Miladi wonders that her lord accepts invitations out for Sunday dinner—but has she reflected that from days immemorial she has had roast lamb every Sabbath? Try a new dinner and he will stay at home, where every man would rather be than any other place, if his needs were considered.

The term scurvy should not be applied to the malady with the classic features described under that name a century ago; but should be extended to signify the need for greater variety in the food. This is especially necessary with children, whose needs are more pressing than those of their parents. Their knowledge and their wills are also less developed, hence these unconscious desires are more apt to lead them into trouble. Would any boy be apt to run the risks incurred in stealing

apples, too green for healthy consumption, if he had plenty of the elements contained therein which his body needs? Any child will eat St. John's bread, May-apples, cornstalks, anything that has the slightest sweetness about it. Why? Better see that he has a plentiful supply of sugar in wholesome yet varied forms.

The best diet is secured by teaching the little patient to eat some of every food that comes to the table. If he does not like any one thing, encourage him to taste a little of it at every opportunity, until custom has rendered the flavor agreeable. Any beginning weakness of digestion is thus kept from developing. The digestive apparatus is trained to do whatever work its owner asks. Nothing disagrees, because the patient is accustomed to everything that can be presented to the stomach for discussion.

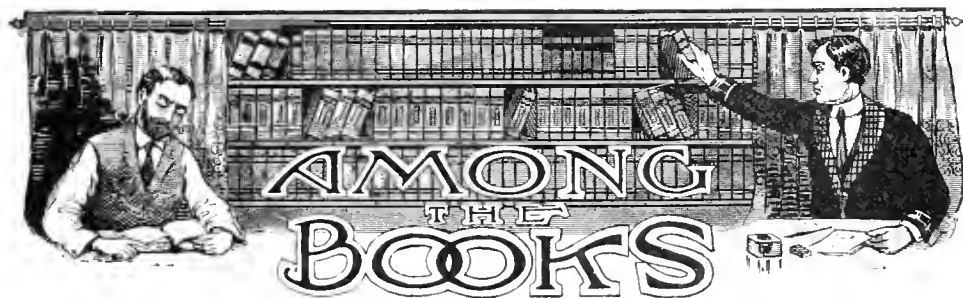
Suppose any one article evidently disagrees. By no means develop a disgust by insisting on a full meal of that, or weaken the digestion by altogether avoiding it. Give the child—or the adult—a single spoonful at each presentation of that food. If this much disagrees, give half as much next time; or a mere trace; but if this proves harmless, increase gradually until the task has been learned, and appetite for that food will come when it is being digested.

WILLIAM F. WAUGH.

Chicago, Ill.

EXAMINATION QUESTIONS

1. What is the most important consideration in the treatment both of rickets and scurvy?
2. Differentiate carefully between rickets and infantile scurvy, giving the most important symptoms of each disease.
3. What is the most important element in the diet of the rickety child? Outline a diet for such a case.
4. What is the most important element in the diet of a child suffering from scurvy? Outline the diet.
5. Give the medicinal treatment for a case of rickets.
6. Describe a case of rickets as seen in your own practice.
7. How would you treat a case of scurvy medicinally?



BALLENGER'S "DISEASES OF THE NOSE, THROAT, AND EAR"

Diseases of the Nose, Throat, and Ear, Medical and Surgical. By William Lincoln Ballenger, M. D. Second edition, revised and enlarged. Illustrated with 401 engravings and 17 plates. Philadelphia and New York: Lea & Febiger. 1909. Price \$5.00.

The first edition of this treatise received the warm welcome we predicted for it, and within the year the entire edition was exhausted. The possessor of the original volume, comparing it with other works upon the same subject, would be apt to wonder how the book could be materially improved, so thoroughly were the surgical—as well as the medical—diseases of the nose, throat, ear and accessory sinuses discussed.

Nevertheless, in the revised edition, the otologist will note several important additions. The functional tests of the labyrinth and their clinical application as elaborated by Barany and others are described and illustrated. No other textbook covers this essential subject, and the busy specialist cannot spare the time to read even the more important articles in the European medical periodicals. The very few errors inseparable from a first edition have been corrected. Several new engravings appear, and in each department those finishing touches which make for perfection have been added, with the result that "Ballenger on the Nose, Throat, and Ear" stands without a serious rival.

Other excellent works there are, but heretofore most authors have devoted their space mainly to a consideration of the nose and throat, dealing but perfunctorily with diseases of the ear. In this work the three

cognate specialities receive equal attention, and particular pains have been taken to describe clearly such nonsurgical procedures as have proven effective. Necessary operations are illustrated, as a rule, and the technic invariably is outlined in terms which cannot be misunderstood.

Ballenger's book will appeal to the general practitioner and specialist with equal force.

G. H. CANDLER.

HAWES'S "CARE OF THE PATIENT"

Care of the Patient. A Book for Nurses. By Alfred T. Hawes, Philadelphia: P. Blakiston's Son & Co. Octavo. Pp. 173. 1911. Price \$1.00, net.

This little guide for nurses compares well with some other books with a similar purpose which have been reviewed in this department. The Bookworm was especially impressed with the terse and compact language of the author, who uses no unnecessary words and thereby is enabled to give an enormous amount of information in a comparatively small space. The language is plain, and readily understandable, even by untrained nurses.

"DR. BETTERMAN'S LETTERS"

The Letters of Dr. Betterman. By Charles Elton Blanchard, M. D. J. D. Albright, M. D., publisher, Philadelphia. 1910. Price, art-poster cover, 75 cents, postpaid.

We have before now (September, 1910) called attention to the Letters of Dr. Betterman, which appeared serially in *The Office Practitioner*, and which, for their quaintness and shrewd philosophy of life, have rarely

been equaled. In accordance with the announcement of the publisher in *CLINICAL MEDICINE* for November, 1910, these letters have been published in book form, and in their entirety they constitute as attractive and entertaining, and withal instructive, reading as they did when they first appeared serially.

The Bookworm hopes that Dr. Betterman will forgive him for not entering into the manifold phases of the contents of his letters, since he has expressed his appreciation so fully in the editorial mentioned above. We cordially recommend the little volume to our readers, convinced that they will derive from its perusal not only entertainment, but also wise counsel presented in an attractive form.

THE INTERNATIONAL MEDICAL ANNUAL

The International Medical Annual: A Year Book of Treatment and Practitioner's Index. 1911. Twenty-ninth Year. New York: E. B. Treat & Company. Price \$3.50.

We wish to call the attention of our readers to the latest volume of the above publication which has just come to our desk. This excellent "Yearbook of Treatment," now in its twenty-ninth year, becomes more and more useful. There is hardly a day on which we do not consult one or more of these volumes for information on some point.

It stands to reason that a volume of this kind, presenting, as it does, abstracts and résumés, or "*Sammelberichte*," from current literature, is difficult to review, but we can assure our readers that the work of selecting and presenting the important literature of the past year has been done excellently. The work is particularly adapted to the needs of the busy practitioner, who should try to obtain a collection of the entire file.

HARROWER'S "LABORATORY DIAGNOSIS"

Essays on Laboratory Diagnosis for the General Practitioner. By Henry R. Harrower, M. D., Chicago: New Medicine Publishing Company. 1911. Price \$2.00.

Dr. Harrower is not only an enthusiastic physician and investigator, he is equally enthusiastic as a teacher and writer. This impression is created immediately on coming in personal contact with the author, and likewise on reading his decisive and incisive papers and especially his breezy editorials in *The American Journal of Physiologic Therapeutics*. Being an enthusiast, Dr. Harrower cannot help but communicate to his readers his own conviction of the importance and value of laboratory work as an aid to diagnosis and treatment; and in truth, on reading the numerous contributions to periodical medical literature, one must admit that the author makes out a good case for his position.

The present volume is a collection of twenty-eight papers, all written, with one exception, during the years 1909 and 1910. The principal subject is on the information to be gained from a thorough uranalysis and on the manner of its execution. Dr. Harrower's style is clear and forcible, and we are sure the little volume will prove of great assistance to the general practitioner.

WATTLES' "THE SCIENCE OF BEING GREAT"

"The Science of Being Great, by Wallace D. Wattles, gives plans and methods for the self-development of an efficient life. The author, in an earnest, sincere way, points the reader to what he considers the sources of power. He tells how to eliminate those qualities which do not make for true greatness. He defines the relation of the individual to society as a whole. He would have us carry the principles of true greatness into all the associations of our daily lives. The central thought running through all the book is the power of thought, rightly directed by the will, to make one truly great." The book contains 156 pages, bound in silk cloth. Price \$1.00. Published by Elizabeth Towne, Holyoke, Mass.

So far the canned editorial sent out with the book takes us. We have gone through the book too. It does not take long. It is good reading. Very Emersonian—and all the better for that, sensible—kindly, with an

uplift that makes it worth while. It is just one of those little books which a thinking man will thoroughly appreciate. It leaves a good taste in the mouth. It is a book you would like to have your son read, if you could get him to do it—which you can't, for he is too busy to bother his head with such questions.

Mr. Wattles' book gives the idea that he is endeavoring to bring out, in a rational, sensible manner, the germ of truth lying at the bottom of Christian science; to winnow from the shipload of chaff the one grain of good wheat.

The difficulty with these people is that they cut loose from common sense. They remind us of the plan submitted by Napoleon's generals in Spain, wherein they proposed to cut loose from the base of supplies and launch forth into the midst of the hostile territory, there to flounder about, to strike aimlessly at whatever offered. The plan, submitted to the great master, was effectually squelched the moment it was promulgated. But that is exactly what the scientist does.

HERTZ'S "CONSTIPATION AND ALLIED INTESTINAL DISORDERS"

Constipation and Allied Intestinal Disorders. By Arthur F. Hertz (Guy's Hospital, London). Oxford Medical Publications. London. 1909. Price \$4.00.

This interesting volume bears throughout the signs of careful and detailed personal investigation. It is, as the author informs us, the outcome of three years' research on the physiology and pathology of the movements of the alimentary canal.

Of particular importance for a proper understanding of the, so often, puzzling symptoms of constipation is the description of the physiology of intestinal movements and of defecation, as described in Part I. Then the causes and varieties of constipation are described as well as the symptoms and conditions associated with, and which often are due to it. The final chapters are devoted to the subject of treatment.

The style is interesting. The personal note inseparable from the relation of one's own experiences tends rather to make the

book more readable. Physicians will find much of value in its pages.

LEA'S "PUERPEAL INFECTION"

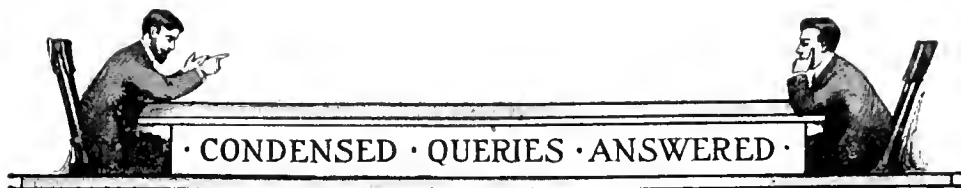
Puerperal Infection. By Arnold W. W. Lea, M. D., B. S. Oxford Medical Publications, London. 1910. Price \$9.00.

A quotation from the preface of this work will be read with considerable interest:

"We are wont to believe that puerperal infection has almost been relegated to the scrap heap, at least in legitimate obstetrics, and that with the modern aseptic technic this serious complication of the puerperium has been at least greatly alleviated. Unfortunately, the figures annually published by the Registrar-General of Great Britain show that the mortality from puerperal infection in the British Isles has very slightly diminished during the last forty years, and that in some parts of the kingdom there is evidence that up to a recent date the disease has shown a tendency to increase in frequency. These facts constitute a grave reproach to the present-day practice of midwifery, and are deserving of the most searching investigation."

In the last quarter of a century our knowledge of the means of prevention of septic disease has become almost complete, and surgical practice, owing to the discoveries of Pasteur, Lister, and others, has undergone a complete revolution. Indeed, it is not too much to state that, in hospitals and in the private practice of surgeons, septic infection has been almost entirely abolished. This, unfortunately, cannot be said of obstetric practice in general, with the exception of lying-in hospitals, in which the mortality has been reduced to a minimum. In the five years of 1851 to 1855 the puerperal death-rate from all causes was 4.9 per thousand, and in the five years ending 1906 it still amounted to 4.2 per thousand.

For these reasons, a treatise dealing with the complex manifestations of puerperal sepsis is timely. It is to be hoped that this work may assist in diminishing the excessive frequency of a disease which, being preventable, should be prevented.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

ANSWERS TO QUERIES

ANSWER TO QUERY 5686.—“Satisfactory Treatment of Chorea.” I notice in your valuable journal, in the department devoted to “Queries,” a communication from “E. E. G.,” Montana, in reference to a case of chorea. Will you pardon me if I give my treatment for this affection, in several cases of which I have been very successful.

Give the Fowler’s solution until you get the physiologic effects—I usually give 5 drops at a dose. Then give Keith’s concentrated tincture of *avena sativa*, commencing with 10-drop doses three times the first day, increasing by one drop each day until 30 drops a dose are being taken. Then decrease one drop per dose each day until back to 10 drops. Then repeat the same dosage for two or three successive courses. I know it will give good results, for it has done so for me in several instances. Of course attention to the diet and bowels is imperative. This is simple, but efficacious.

J. A. NELMS.

Jackson, Ga.

constant practice. This refers only to the local treatment (the constitutional has been well suggested in the note by CLINICAL MEDICINE). Paint the fissure, as often as needed, with 4 percent solution of cocaine and apply bismuth paste, containing glycerin and bismuth subnitrate, mixed to about the consistency of heavy cream. The cocaine relieves the constant nervous irritation and gives wonderful relief. It was used on my own fissure with gratifying and lasting benefit. But the stomach and digestion must be carefully attended to.

Paint often enough to keep the fissure moist—entirely dead to any irritating influence. The sensitive nerve protruding prevented healing, by constant irritation on my tongue, until relief was permanent. I painted sometimes every hour. You will be surprised at the *comfort* and actual gain, while the bismuth cream will allow granulation and the healing process to go on uninterruptedly.

D. W. HUNT.

Glendale, Calif.

ANSWER TO QUERY 5691.—“Fissure of Tongue.” May I make a suggestion, as I have had no little experience and am a practitioner of more than forty years’

[There is always danger of habit formation when cocaine is used continuously. Would not orthoform be equally effective, and free from this danger?—ED.]

QUERIES

QUERY 5704.—“Prolonged Exhibition of the ‘Trinity.’” W. T. B., Arkansas, wants to know if we think it safe to give the dosimetric trinity for a number of days. It occurs to him that the digitalin (and possibly strychnine) would be dangerous.

The most toxic ingredient of the “trinity” (containing aconitine, gr. 1-34; digitalin, gr. 1-67; and strychnine, gr. 1-134) is of course aconitine, and signs of aconitine sufficiency are the indications for stopping the administration of this combination.

The amount of digitalin and strychnine received by the patient in any one day could not possibly prove dangerous, provided the trinity is used according to the "aconitine rule."

The age and condition of the patient must always be taken into consideration. As a matter of fact it is rarely desirable to give *constant* doses of aconitine, digitalin and strychnine for several days; though many of us recommend one or two granules of the trinity, morning, noon and night, to equalize the circulation. If the *primæ viæ* are effectively cleaned out and renal and dermal elimination maintained, most febrile conditions are controlled by a comparatively small number of doses of aconitine, digitalin and strychnine. Adults and robust children should receive, preferably, the defervescent formula containing aconitine, digitalin and veratrine. The "trinity" is especially indicated in asthenic conditions, or in the later stages of rebellious or poorly treated febrile disorders.

The "safe dosage" of amorphous aconitine for an adult is 1-134 grain given ten to twelve times daily. From 1-10 to 1-2 grain of digitalin *may* be given three or four times daily, and as much as 1-40 grain of strychnine arsenate has been given four times a day in hundreds of instances. Bear in mind, always, Doctor, that dosage depends upon the conditions present in the individual. A patient presenting a high temperature may receive with benefit an amount of aconitine which would prove detrimental to a normal individual. Give the small repeated doses of the indicated remedy (make your selection carefully) to effect, remedial or physiological, and you can hardly make a mistake.

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 QUERY 5705.—"Local Treatment of Carcinoma of Breast." J. R. T., California, understands we have recommended a "treatment for carcinoma of the breast consisting of hyposulphite of soda and epsom salt," etc. He desires to know the exact method or be referred to literature on the subject.

The doctor is in error. We have never heard of such a combination being used by a regularly qualified physician; further-

more, we have never advocated "local treatment" for carcinoma. The only effective procedure is immediate and thorough extirpation of the mass. Cancer of the breast is—especially in the early stages—readily extirpated, and it is poor practice to treat the condition with escharotics, etc.

We *have* advocated from time to time the use of an arsenical paste in epithelioma and shall be pleased to outline technic for interested practitioners. In this connection, we should state that the applications of compresses wrung out of a carbolated solution of epsom salt markedly reduces fetor and discharge from cancerous areas and alleviates pain considerably. Thuja may be applied direct to the affected surface and the hot compresses then applied and changed frequently.

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 QUERY 5706.—"Pemphigus or Pompholyx, Not Senile Gangrene." A. L. S., Oklahoma, finds himself "in a quandary as to how to diagnose a case of apparent senile gangrene" which does not conform with his knowledge of this disorder. History: "Female, age about sixty, all children grown, with healthy families. Had smallpox three years ago. Had only two or three papules. Every spring since then she had a variolous 'breaking out' upon the feet and other parts of her body. They seemingly go through all of the stages of variola. All the vesicles which secreted pus have been opened, washed with lysol solution and then dusted with an antiseptic powder. The most annoying places are on her feet, on the outer aspect. Her health is good, but she is bothered a little with rheumatism. Is there such a thing as recurrent smallpox? Is this eczema—or *what* is it?"

There is no such thing as "recurrent smallpox," and we do not think your patient suffers from "senile gangrene." She could hardly present gangrenous extremities each spring; eczema may also be excluded.

The woman may have pompholyx. In this affection the patient usually first notices burning and itching of the soles or sides of the feet or toes. In a few hours small vesicles, with an erythematous zone,

appear in these locations. Sometimes they coalesce and form quite large bullæ, the contents of the vesicles later becoming turbid or purulent. As a rule the backs of the hands and feet are not affected. Relapses in the same or following years are common.

A purulent pemphigus must also be thought of. In pemphigus foliaceus the bullæ are flaccid with opaque contents. The vesicles rupture early and leave moist, raw surfaces. Quite frequently a sickening odor will be noted about the parts which are bathed with seropus. In most cases patients are autotoxemic. It is essential always to secure free elimination. The urine should be examined in this case.

Perhaps you could not do better than give blue mass and soda, 1-2 grain; iridin, 1-6 grain; podophyllin, 1-12 grain, half hourly for four doses every third night, following with a saline draught the next morning. Give iridin, rumicin and stillingia before meals; dilute phosphoric acid, 10 minims, with meals; the arsenates (preferably with nuclein) after food; calcium sulphide one grain every two hours. Locally cleanse with hydrogen peroxide; then with boric-acid solution, dry and apply bismuth-formic-iodide or thymol iodide, and lycopodium equal parts. Epsom-salt baths, carbolated, afford almost instant relief. The usual proportions are: epsom salt one ounce, water one quart, carbolic acid twenty minims.

If you will send some of the discharge from the bullæ and specimen of the patient's urine to our pathologist, together with a full clinical picture, we shall be pleased to make a further suggestion.

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 QUERY 5707.—“Diabetic Gangrene.” H. E. B., Illinois, reports the case of T. G., who ten days ago burned the back of his hand. Within thirty-six hours the hand was greatly swollen; incision was followed by a free discharge of ichorous pus. Friday, Saturday and Sunday the inflammation gradually extended up the back of the arm to half way between elbow and shoulder. Eleven large incisions in the arm were made and free drainage secured. The last two days there was not much change; no ex-

tension, no gangrene. Patient in early stages ran fever of 101° to 102° F. Now temperature ranges from normal to 100.5° F. Pulse in beginning 120; now averages 100 to 106. General condition seems good; no delirium; tongue good, but dry. Age of patient sixty-three. He is fleshy, has lost no weight, and health has been comparatively good. From the above data and examination of patient's urine we are asked to express our opinion as to the probable outcome and whether amputation in such cases of infection (excluding gangrene) is the thing to advise.

The report of our pathologist upon the specimen of urine shows an enormous amount of sugar, also evidence of a nephritic condition (albumin, casts, etc.). From a rather extended experience we should, under such circumstances, be inclined to urge *immediate* amputation of the affected limb, though only a surgeon who can see the patient personally can give absolutely safe advice. We fear you will lose your patient if operation is delayed much longer. It may be necessary to amputate at the joint, though this is a formidable procedure and the surgeon may elect to make a lower division. The patient will require very careful medication and constant care for some time.

We suggest the desirability of pushing nuclein, echinacea and strychnine hypophosphite in frequent and rather large doses. Free elimination must of course be maintained. Pending operation, keep the arm saturated with hot compresses wrung out of echinacea, thuja and distilled water, equal parts. We should irrigate the sinuses thoroughly with the same solution, first cleansing with peroxide of hydrogen. Inunctions with colloidal silver ointment (Credé) are advisable.

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 QUERY 5708.—“Diphtheria Antitoxin in Scarlatina.” J. N. M., Iowa, asks: “If I gave large doses of diphtheria antitoxin in a case of scarlet-fever, what would the result be?”

It is impossible for us to answer your question intelligently. What dose do you call “large?” What is the age of the patient? What are the symptoms? What

antitoxin did you use? Give us clearer data and we will try to give you a definite answer to the question. On general principles we might state that the exhibition of reasonably large doses of diphtheria antitoxin to a patient suffering from scarlet-fever would not prove injurious, though it could hardly be expected to exert a beneficial influence unless a mixed infection existed. If the infection were severe and the amount of serum injected excessive a fatal reaction might be set up. All potent sera must be used with nice discrimination and only after a definite diagnosis has been made.

QUERY 5709.—“Sclerose en Plaque.” A. A., Minnesota, is anxious to know whether there are any new medicines or methods of treatment likely to help in a case of *sclerose en plaque*, or localized sclerosis of spine.

His patient is a young man of twenty-six years, butcher by trade, who presented himself, two months ago, walking zigzag as if he were drunk. “I am never drunk,” he said to the doctor, “but people think I am.” It was explained to him that the whole trouble was in the spine. He had been treated elsewhere for “rheumatism,” but without any improvement. The doctor writes:

“I treated him as best I could for two months, without results, and I am not at all surprised, for I do not think there is any cure for that malady. Electricity, strychnine, etc., were tried. The bladder seems affected most. He walks with a chair in front of him; can stand up alone, but cannot walk alone. Knee-jerk is exaggerated. If you start it you can't stop it. Is not losing flesh much, and always hopes to get better. Appetite is good, sleeps well, has no rise of temperature. He cannot carry anything to his mouth if it is liquid. Sensation is diminished. He does not seem to feel the heat that touches his legs. So far as I can see, it is a distinct case of sclerosis. I have told his family he may live five years, more or less.”

Spinal sclerosis in any form is extremely rebellious to treatment. In primary lateral sclerosis (spastic paraplegia), the onset of the disease is very gradual, the patient

noticing a sense of heaviness and dragging of legs. He becomes tired easily. By degrees the gait becomes more labored and dragging, but there is no pain, and usually paresthesia is absent or, if present at all, is very slight.

A diagnosis can be made (1) from a marked rigidity of the legs, (2) increased reflexes, (3) weakness of the legs, with impairment of the movements. On attempting to make passive movements of the legs, resistance is experienced and occasionally there is a strong extensor spasm when the legs are extended. The skin reflexes are usually increased. There is a marked increase of the knee-jerk and tendo Achillis reflexes; ankle clonus is present on both sides. The patient steps short, the legs not being raised high enough. The gait, therefore, is shuffling; the patient has a tendency to walk on his toes. Sensory symptoms usually are absent; occasionally there is numbness and tingling in the limbs. The pupils are not altered, the memory is impaired, but there is no affection of the speech or sense-organs.

There are several forms of the disease, the course of which is chronic. Death may occur from marasmus or intercurrent disease. Frequently autopsy proves a so-called primary lateral sclerosis to have been spinal syphilis or a disseminated or posterio-lateral sclerosis. Some cases are of endogenous origin (hereditary); others are the result of an infectious or toxic condition. Treatment often is useless and may even be injurious; arsenic is worth a trial. Lecithin and chromium sulphate might be pushed advantageously.

In disseminated sclerosis, which is far from being a common disease in this country, the previous history usually presents nothing of interest. The disorder usually commences in early adult life, sometimes following an acute fever, typhoid, influenza, scarlet-fever or acute rheumatism, but sometimes appearing in apparently perfectly healthy individuals. The disease has no relation to syphilis.

Most authorities regard disseminated sclerosis as of an endogenous nature, attributing it to a congenital abnormality which leads to multiple proliferation or neu-

roglia (multiple gliosis). Autopsy reveals patches of disease (sclerosis) scattered about in the most irregular manner in the brain, pons, medulla, and spinal cord. One form of disseminated sclerosis closely resembles disseminated myelitis. Sometimes the margin of the patches is not sharply defined, but presents radiating processes ("*sclerose non en plaques mais en taches*"). Owing to the variable distribution of the sclerotic patches the modes of onset and symptoms differ greatly.

There are three stages; the early period, in which the symptoms vary and are indefinite; the second period, in which the symptoms are well marked; and the final period, characterized by failure of organic function, paralysis of sphincters, cystitis, and bed-sores.

The symptoms of which the patient first complains are usually a feeling of weakness in one or more limbs, numbness and other forms of paresthesia in the hands or legs, tremor of extremities, impairment of vision, vertigo, etc. Later we find tremor of the arms, nystagmus, "scanning" speech, weakness with spastic condition of the legs. The knee-jerks are exaggerated, ankle clonus and an extensor form of plantar reflexes develop. Bear in mind that the tremor occurs only on voluntary movement. There is no tremor during repose. You should test the handwriting of your patient and ask him to draw a straight line. The handwriting is affected early, not infrequently the pen is jerked so violently that only a few dashes are produced; in other cases the writing is jerky and letters irregular.

Without a much clearer idea of conditions present in your patient, we cannot venture a definite diagnosis. If he is suffering from disseminated sclerosis, the prognosis is bad and there are no known means of curing the disease. Rest, tonic treatment and good hygienic conditions are of some service. Quinine arsenate has given some results, and lecithin is a useful adjuvant. Wherever fibrous degeneration exists, chromium sulphate may prove useful, from which some very remarkable results have been reported by clinicians throughout the country. You will find in

Williamson's "Diseases of the Spinal Cord," Oxford University Press, London, a full description of the disease.

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 QUERY 5710.—"A Case of 'Bold Hives.'" A. A. S., Ohio, asks for treatment (and cure if possible) for a case of bold hives of several years' duration and which has not been amenable to treatment. The patient is a woman, 40 years old, regular, and well nourished. In the day time she will be "almost covered with lumps and swells all over her hands and feet, with excessive burning and itching." She has received calomel, soda, and iodalbum, the iodides, lithium, ipecac, and several kinds of alteratives, but the disorder always returns after a short period of freedom.

Unfortunately this is not an uncommon condition and, as you are aware, the eruption may be due to any one of half a hundred systemic disorders. It is unquestionably more common in the female sex. Occasionally an individual predisposition seems to exist. Again, especially in cases presenting giant lesions and edematous swellings, there often is a hereditary taint. In nearly every case, gastric and intestinal disorders exert a potent contributory influence. Some patients erupt whenever they eat certain articles of food, for instance, oysters, crabs, fish, pork, veal, nuts, mushrooms, strawberries, cucumbers; others may suffer at the change of seasons.

The writer once treated a woman who suffered from giant urticaria. Whenever she became angry (and she frequently did!) the mental storm disturbed her digestive processes, with the result that sharp toxemia was set up, its presence invariably being manifested within forty-eight hours by the eruption. Then, also, a chronic form of the eruption may appear in patients suffering from malaria, albuminuria or diabetes. Recent investigations have proven an underlying acidemia in almost every instance.

You do not give clear enough clinical data to enable us to prescribe very intelligently for your patient, and we suggest that you examine her thoroughly and report findings, sending at the same time a specimen of urine to our laboratory.

In the meantime, secure free elimination. Give blue mass and soda, gr. 1-2; xanthoxilin, gr. 1-3; rumicin, gr. 1-2; every hour from 7 to 10 p. m., every other night for a week. A full dose of some saline, to flush the bowels, the next morning before breakfast. To insure elimination of uric acid, give calcium carbonate and lithia midway between meals; also 10 drops of dilute phosphoric acid in a glass of water with meals. A laxative containing podophyllin and sulphur and the sulphocarbonate of sodium will prove excellent alternants. Should the attack recur, swab the affected area with a camphorated solution of menthol, adding sodium bichlorate. Another excellent application is carbolic acid, 15 grains; spirit of peppermint, 15 minims; zinc oxide, 3 drams; lanolin, 12 drams; vaseline, 1 ounce.

Diet the patient carefully. Direct her to sponge the skin thoroughly with a carbolated solution of magnesium sulphate three times a week, following this with brisk friction with a rough bath towel. The usual proportions are, magnesium sulphate, 1 ounce; water, 1 quart; carbolic acid, 10 minims. Zinc phosphides sometimes acts with almost magical celerity in these cases, gr. 1-67 every three hours for a day or two.

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QUERY 5711.—“Dosage of the ‘Anodyne’ and ‘Calmative’ Formulae.” N. C., Illinois, wishes to know the correct dosage for infants of the anodyne and calmative granules. He has a little one, three weeks old, on his calling list and wishes to prescribe these combinations.

As we have so frequently pointed out, the dosage must necessarily depend to a great extent upon the conditions present in the patient under observations.

In the anodyne combination the codeine-content (gr. 1-67) must, of course, be considered; in the calmative, the hyoscyamine ingredient (gr. 1-500). To a child three weeks old you may, with perfect safety, give 1-3 to 1-2 an anodyne granule in solution and repeat the dose in fifteen minutes. If this is not effective, give one-half the quantity in fifteen minutes and the rest at the end of the hour. If the

conditions are pronounced, and immediate relief is demanded, give one-half a granule in solution. Follow with 1-4 of a granule fifteen minutes later, and another fourth at the end of half an hour. Personally, where conditions demand it, we do not hesitate to give even larger doses; in fact, we have scores of times given one granule to a two-week old child.

Infants respond readily to hyoscyamine. For a child three weeks old, dissolve one calmative tablet in 60 drops of sweetened water and give 10 to 15 drops every fifteen minutes to effect. The face, remember, will become decidedly flushed, and after two or three doses the pupils will be dilated. It is well to warn the mother or nurse that these symptoms will appear and that they are merely evidence of the efficacy of the medicine.

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Query 5712.—“Amount of Arsenic in Strychnine Arsenate.” W. A., Illinois, desires to know how much arsenic there is in strychnine arsenate.

The molecular weight of strychnine arsenate is approximately 485, and as it contains one atom of arsenic, having an atomic weight of about 75, the salt contains about 16 percent (about one-sixth) of metallic arsenic. But since arsenic, the metal, is never used medicinally the content of this substance is best expressed in terms of arsenic acid (H_3AsO_4) one molecule of which occurs in every molecule of strychnine arsenate; the salt contains, therefore, approximately 30 percent of this form of arsenic. This gives a nice balancing of the proportion of the two elements in strychnine arsenate, ensuring the tonifying, blood-building action of arsenic with the nerve-tonic properties of strychnine. It is an ideal preparation—by all odds the best salt of strychnine to really “build up” a run down patient, especially when associated with the arsenates of strychnine and iron. Arsenic, in these days, is coming into its own again. See how popular atoxyl became, and later salvarsan. These have something more than “simple” arsenic action; this is also true of the arsenates, other opinions to the contrary notwithstanding.

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